Report to

THE GOVERNOR'S COMMITTEE TO STUDY PUBLIC VS. PRIVATE OWNERSHIP AND OPERATION OF PUBLIC SCHOOL TRANSPORTATION IN THE STATE OF MARYLAND

Arthur D. Little, Inc.

Report To

THE GOVERNOR'S COMMITTEE TO STUDY PUBLIC VS. PRIVATE OWNERSHIP AND OPERATION OF PUBLIC SCHOOL TRANSPORTATION IN THE STATE OF MARYLAND

September, 1971

73370

Arthur D Little, Inc.

TABLE OF CONTENTS

LIST OF EXHIBITS

EXECUTIVE SUMMARY

The following excerpts from this report highlight the major findings, conclusions, and recommendations of this study:

- Findings and Conclusions as to Costs

  - This study is predicated on a comparative analysis of the pro forma costs of using each of the.... approaches in the six selected localities.(page 20)

  - Given the present policies on reimbursement of transportation costs by the State, public ownership would result in a smaller reimbursement in all of the studied localities, except Baltimore City. (page 30)

  - Both Baltimore City's and Montgomery County's higher costs for public ownership reflect the following differentiating elements:

    (i) high wages,

    (ii) more comprehensive and more expensive packages of employee fringe benefits, and,

    (iii) higher expenditures for capital outlay facilities. (page 36)

  - Private ownership appears to result in the reimbursement of a larger portion of pupil transportation costs...this has tended to tacitly encourage local use of contractors. (page 36)

  - From the taxpayer's point of view

    - public ownership is not uniformly more economical throughout the State,

    - the economic advantage of one approach versus another is so narrow, i.e., less than 5%, in some cases that it might be regarded as immaterial. (page 36)

- Comments on Field Trips

  - It is difficult to conceive of a theoretically valid approach for objectively determining whether field trips would increase as a result of public ownership. (page 40)

  - Baltimore City, Montgomery County, and Frederick County use different approaches to accounting for field trips and other joint uses of transportation personnel, equipment, and facilities. (page 40)

  - The State Department of Education should develop rules of accounting for joint usage of transportation personnel, equipment, and facilities. (page 41)

- Comments on Safety

  - The problem with the past attempts to correlate accidents with a type of ownership is that they are spurious. (page 43)

  - Although the State's present safety record is commendable, its driver training and safety programs need to be improved. (page 46)

  - The State should assume, on a reasonable basis, the administrative and financial responsibilities of driver training. (page 50)

  - The State Department of Education should set definitive requirements for pre-service and in-service training. (page 50)

  - Any premium wage paid to drivers should be predicated on satisfactory participation in at least 16 hours of training per year. (page 50)

  - The political subdivisions of the State should be reimbursed for an adequate number of driver trainers. (page 50)

  - The State Department of Education should implement a program of school bus injury research. (page 51)

  - The State Department of Education and the Department of Motor Vehicles should be funded to study possible improvements in school bus specifications and inspection. (page 51)

- Local Operating Practices and Philosophies

  - A wide disparity in operating practices and procedures exists among almost all of the studied localities. (page 53)

  - The State Department of Education should be encouraged and funded to study computer-assisted routing and scheduling. (page 54)

  - A serious question still remains as to how far local preferences should dictate equipment choices when the State funds the entire procurement cost. (page 55)

  - The State Department of Education should encourage the development of common school bus specifications and pool purchasing. (page 55)

  - The processes used to award contracts varies considerably. (page 56)

  - Not all localities used written contracts - written contracts should be required. (page 56)

  - Given the continuation of full State funding of transportation, the primary thrust at obtaining economy should be based on periodic managerial audits. (page 58)

- Policy at the State Level

  - The principal criticism of the State's present approach is that the State fails to encourage efficiency at local levels because the localities do not participate materially in the costs of transportation. (page 62)

  - The State should require material local participation in transportation costs. (page 62)

  - The State's policy for reimbursement for transportation should be consistent with its overall policy for public education, i.e., the full cost of capital outlays and not more than 2/3 of the cost of operation should be reimbursed. (page 62)

  - This policy should be implemented using Dr. Henry's linear density index. (page 62)

  - The portion of operating costs reimbursed by the State should be gradually reduced from the present 100% level to effect a transition from the present policy. (page 63)

I. ORIGINS AND CHARACTER OF THE STUDY

A. THE EARLY DEVELOPMENT OF PUPIL TRANSPORTATION

The free transportation of pupils to public schools has been, and is, a natural and an integral part of the evolution of the nation's system of free public education.

Not until compulsory attendance was generally accepted throughout the nation was free transportation reasonable and necessary as a part of the nation's education program. When Massachusetts, a traditional leader in these matters, enacted the nation's first law requiring compulsory attendance in 1852, it quickly found that it could not do so without penalizing both the parents and children who lived in remote areas of the Commonwealth. In 1869, the Commonwealth enacted the nation's first law funding pupil transportation.

Maryland was somewhat slower than Massachusetts in its organization of public education and of pupil transportation. Not until 1864 could the Maryland Legislature agree upon education as a part of the State's responsibility and enact the legal foundation for the formation of the Maryland State Department of Education.

By the late 1890's Maryland educators had begun to consider consolidating schools. As a result, a comprehensive act was passed by the Maryland State Legislature which contained the provision for consolidation. By 1916, the consolidation of rural schools and the transportation of pupils had grown to the extent that the Maryland State Legislature passed a bill making pupil transportation not only legal, but mandatory. The act reads as follows:

> "The County Board of Education shall consolidate schools wherever, in their judgment it is practical, and arrange, when possible without charge to the county, and shall pay, when necessary, for the transportation of pupils to and from such consolidated schools."[1]

In 1922, the State Legislature, in a landmark step, enacted the Equalization Bill, and placed transportation approved by the State Superintendent of Schools in the minimum program. Since that time, the State Superintendent has had control of pupil transportation.

---

[1] The Annotated Code of Maryland (1957 edition). Section 61, Article 77.

B. THE "ZIMMERMAN" FORMULA

Historically, reimbursement for school transportation in Maryland began in 1922 and followed a four-phase pattern. For the first eleven years, the State administered the program and approved costs without a specific written policy. From 1933 through 1942, all contracts were bid. From 1942 to 1947, because of the war conditions and their aftermath, the program reverted to no bid.

In 1947, as a result of an exhaustive study by Dr. David Zimmerman,[2] the Zimmerman formula was developed to determine the maximum amount of State reimbursement. This formula, with adjustments to reflect the changes in the economic conditions of the State, has remained in effect until today. Not until the 1960's however, did the contractors generally become aware of the existence, composition, and influence of the Zimmerman formula.

The formula, which uses approximate cost data to establish reasonable prices for contractor services, has remained largely unchanged throughout the years. It has always included seven factors:

- Amortization,
- Interest,
- Drivers' salaries,
- Gasoline, antifreeze, etc.,
- Tires,
- Maintenance,
- Other fixed costs of operations.

Exhibit 1 shows the changes in these factors over the past 23 years.*

In 1964, the State assumed the full cost of transporting pupils to public schools when such transportation is approved by the State Superintendent of Schools. The intent of this legislation, which is still in force, is met by the State's present program of reimbursement for the costs of pupil transportation.

---

[2] David W. Zimmerman, Factors Affecting the Cost of Pupil Transportation in Maryland, (unpublished doctoral dissertation, Johns Hopkins University, Baltimore, Maryland, 1948.)

* The current "Policies Which Govern Approval of Transportation Costs for Inclusion in Minimum Program" and the updated "Transportation Formula for Maryland" appear as Appendix I.

EXHIBIT 1

CHANGES IN MARYLAND CONTRACT REIMBURSEMENT FORMULA FOR SIXTY-PASSENGER VEHICLES, 1949-1972

Year	Amortization (%)	Interest (%)	Driver's Salary ($/day)	Gasoline, Oil, etc. (¢/mile)	Tires[1] (¢/mile)	Maintenance[2] (¢/mile)	Other Fixed Costs ($)
1949-50	12.5	5	4.00[3]	.0385	.0186	.0250	75.00
1950-51	12.5	5	4.00[3]	.0385	.0186	.0250	75.00
1951-52	12.5	5	5.00[3]	.0545	.0211	.0318	75.00
1952-53	12.5	5	5.00	.0545	.0211	.0318	75.00
1953-54	12.5	5	5.50	.0545	.0211	.0318	75.00
1954-55	12.5	5	6.00	.0545	.0211	.0318	75.00
1955-56	12.5	5	6.00	.0545	.0259	.0318	75.00
1956-57	12.5	5	6.00	.0545	.0259	.0318	75.00
1957-58	12.5	5	7.00	.0644	.0310	.0450	75.00
1958-59	12.5	5	7.00	.0644	.0310	.0450	75.00
1959-60	12.5	5	7.00	.0644	.0310	.0450	75,00
1960-61[4]	12.5	5	7.00	.0644	.0310	.0450	75.00
1961-62	12.5[5]	5	7.50	.0644	.0341	.0450	75.00

EXHIBIT I (cont'd)

Year	Amortization (%)	Interest (%)	Driver's Salary ($/day)	Gasoline, Oil, etc. (¢/mile)	Tires[1] (¢/mile)	Maintenance[2] (¢/mile)	Other Fixed Costs ($)
1962-63	12.5[5]	5	7.50	.0644	.0341	.0450	75.00
1963-64	12.5[5]	5	7.50	.0644	.0341	.0450	75.00
1964-65	12.5[5]	5	7.50	.0644	.0341	.0450	75.00
1965-66	12.5[5]	5	7.50	.0699	.0341	.0450	75.00
1966-67	12.5[5]	5	8.00	.0669	.0341	.0450	125.00
1967-68	12.5[5]	5	8.00	.0669	.0341	.0450	125.00
1968-69	12.5[5]	5	8.00	.0716	.0375	.0550	125.00
1969-70	12.5[5]	6	8.00	.0716	.0375	.0550	125.00
1970-71	12.5[6]	7	8.50	.0756	.0375	.0550	(7)
1971-72	12.5[6]	7	10.00	.0801	.0397	.0583	(8)

(1) 1949-1955 tire size 8.25 x 20; 1956-1972 tire size 9.00 x 20
(2) For buses with less than 50,000 miles and/or less than four years old the per mile allowance was .021 for 1951-52 through 1956-57. For the years 1957-58 through 1960-61 the rate was .03.
(3) Rural operation: in 1949-1950 and 1950-51 urban operation was $5/day; in 1951-52 urban operation was $6/day.
(4) $50 additional per contract approved this year.
(5) Based on $7,500 maximum allowable acquisition cost per bus.
(6) Based on $8,000 maximum allowable acquisition cost per bus.
(7) 11% of the Allowance for Driver's Salary
(8) 11% of the Allowance for Driver's Salary plus $20 for school bus tags.

C. THE DIXON COMMITTEE

In 1964, a committee[3] was formed to study the reimbursement for public school transportation. The committee stated its problem as follows:

> "With reference to all the facets of pupil transportation costs and the subsequent payment of these costs by the local subdivisions and the State, what procedures to be best formulated to:
>
> 1. Provide the best possible transportation for each public school child in Maryland who needs that service,
>
> 2. Provide that service at the lowest possible cost, and,
>
> 3. Allow the State to reimburse the local units for this cost in a manner which is equitable for each county and child, and which can be adequately and efficiently administered with a minimum amount of effort."[4]

In addition, the Dixon Committee discovered that numerous other questions existed, and agreed that some light could be thrown on such questions as:

> "How do overall costs of operating publicly-owned buses compare with costs of contract buses?"[5]

This question is the subject of the present study.

The primary conclusion of the Dixon Committee was:

> "The present method of reimbursement for transportation costs in Maryland is adequate to provide the services required and needs only to be adjusted to include or delete items and remove potential inequities."[6]

Chapter V, Conclusions and Recommendations of the Dixon Committee's Report appears as Appendix II.

---

[3] Known commonly as the Dixon Committee and officially as the Committee to Study Reimbursement for Public School Transportation. The members included: Chairman, Samuel Dixon; Walter Gordon; Paul A. Henry; Harry T. Murphy; Benjamin W. Nelson; and Morris W. Rannels, Ex Officio.

[4] State Reimbursement for Public School Transportation in Maryland, A Report Submitted by the Committee to Study Reimbursement for Public School Transportation, Maryland State Department of Education, September, 1964, page 10.

[5] Ibid, page 11.

[6] Ibid, page 61.

D. STATE BOARD OF EDUCATION RESOLUTION 1968-15

The issue of public versus private ownership again came into the public view in 1968. On March 27, the Maryland State Board of Education adopted a resolution which urged a transition to public ownership. The full text of this resolution appears together with the text of the State Superintendent's recommendations for its implementation as Appendix III.

The State Board urged the State Superintendent of Schools to promulgate guidelines for the establishment of a transitional policy which would avoid undue financial hardship to contractors then serving the various school districts. In the response by the State Department of Education -- i.e., Recommendations for the Implementation of the State Board of Education Resolution, 1968-15 -- the State Superintendent cited two reasons for the transition to public ownership:

1. "To effectively control the transportation service as an integral part of the total school program, and,

2. To keep the cost of transportation services as low as possible without compromising the safety or efficiency."[7]

The Department recommended a gradual transition from private ownership to public ownership. This program was to be implemented with careful consideration to the welfare of those individuals who have faithfully served as school bus contractors.

One of the primary results of the Resolution was the acceleration of the private contractor's efforts to organize resistance to any transition from private to public ownership. Local school boards and school administrators became the focal points of a rivalry between the State Department of Education and the organized school bus contractors.

E. THE AVARA COMMISSION

Within a year aspects of the controversy began to spill over into the State Legislature. The 1969 session of the Maryland Legislature requested the establishment of a Governor's Commission to study the questions raised by the State Board of Education's action. This 15-member committee, known as the Avara Commission, was composed of State legislators, State and local education officials, and private bus contractors.

---

[7] "Recommendations for the Implementation of the State Board of Education Resolution 1968-15". Maryland State Department of Education, October 1968.

The commission held five public sessions. A large volume of conflicting testimony was filed with the group. In its report to the Governor the Commission summarized its dilemma by stating:

> "... ... Almost everyone agreed that they were not in a position to make a definitive statement at this time indicating that one type of ownership was superior to the other."[8]

The full text of minority and majority reports of the Commission appear as Appendix IV.

The Commission recommended an in-depth study by an independent, impartial consulting firm. An additional recommendation suggested the development of a new State pupil transportation cost reimbursement formula to apply equally, regardless of bus ownership.

F. THE CURRENT STUDY

The failure of this Commission to come to a conclusion did not diminish the controversy. Thus, in 1970, the Maryland Legislature expressed itself by requesting the Governor to undertake an independent and impartial study of the issue. This expression of interest is reflected in Senate Joint Resolution No. 8, which is reproduced as Exhibit 2.

On September 4, 1970, the Governor appointed a five-member committee to carry out the terms of the resolution. This committee, known as the Governor's Committee to Study Public Versus Private Ownership and Operation of Public School Transportation in the State of Maryland, included the following members:

B. Melvin Cole,
Ellis James Dudney,
Paul A. Henry,
T. H. Schaefer,
Fred H. Spigler, Jr., Chairman.

On February 10, 1971, the Committee selected the management consulting firm of Arthur D. Little, Inc., (ADL) of Cambridge, Massachusetts, to examine the subject of public versus private ownership and operation of public school transportation systems in the State of Maryland. This study was to analyze:

- The direct and indirect costs of pupil transportation programs in Baltimore City and five contrasting counties in Maryland,

---

[8] "Report of the Governor's Commission to Study School Pupil Transportation", Legislative Council of Maryland, Annapolis, 1969, page 2.

EXHIBIT 2

JOINT RESOLUTION

Senate Joint Resolution requesting a study of public and private ownership of school buses and for continuation of the existing system of ownership pending completion of this study.

The Governor's Commission to Study School Pupil Transportation devoted considerable attention to the problems relating to school pupil transportation and whether this transportation can best be provided by public ownership of buses or by private contractors. The Commission received testimony from the State Department of Education and from private contractors concerning the advantages of each system of ownership and the relative costs of each system.

The Commission concluded that only a comprehensive and in-depth study of this complex subject will present a true and accurate picture of the cost and other factors relating to public versus private ownership of school buses.

The members of the General Assembly are concerned that transportation of public school children in Maryland be accomplished at the lowest possible cost consistent with the safety of the children involved. They also believe that a thorough and comprehensive study of the advantages and disadvantages and the relative cost including all factors needs to be made of public and private ownership of school buses.

The General Assembly believes that pending the completion of such a study, the State Board of Education and the ~~county~~ LOCAL boards of education should not undertake any modification of the present status of private and public ownership of school buses and should not encourage any change from private to public ownership of school buses; now therefore be it

Resolved, That the General Assembly of Maryland requests ~~and directs the State Board of Education~~ THE GOVERNOR OF MARYLAND to have an independent and impartial study undertaken of the subject of public versus private ownership of school buses, and that the study devote attention to the relative cost of each system of ownership, to the ability of each system to transport pupils in rural and urban areas; and to the feasibility of single formula for reimbursement to the county ~~board~~ OR CITY BOARDS of education irrespective of whether the county OR BALTIMORE CITY utilizes public or private ownership of school buses or a combination of ownership and; be it further

Resolved, That this study should be completed and submitted to the General Assembly by January 1, 1971, and; be it further

Resolved, Pending the completion of this study, that the State Board of Education and the local boards of education should not modify the present status of private and public ownership of school buses or encourage any change from private to public ownership of school buses, and; be it further

Resolved, That copies of this resolution shall be sent to the GOVERNOR OF MARYLAND, THE State Board of Education and to the county boards of education.

EXPLANATION: *Italics indicate new matter added to existing law.*
[Brackets] indicate matter stricken from existing law.
CAPITALS indicate amendments to bill.
~~Strike out~~ indicates matter stricken out of bill.

- The direct and indirect costs of school transportation in the subdivisions for field trips, scholastic events, handicapped pupils, and vocational education.

In addition, the study was to evaluate:

- The philosophical assumptions and practices utilized as basis for establishing the level of pupil transportation programs in each subdivision,

- Any additional approaches that offer advantages over the present patterns of public or private ownership of school transportation, and,

- The State formula of pupil transportation reimbursement and its adequacy in terms of underwriting the costs required for pupil transportation programs.

G. STUDY APPROACH

The Committee and representatives of ADL selected six political subdivisions of the State for intensive study: Anne Arundel County, Baltimore City, Frederick County, Garrett County, Montgomery County, and Wicomico County. These subdivisions include examples of both public and private operation in rural, suburban and urban communities. They also include large and small school districts, and are representative of the geographical and topographical conditions of the State. The transportation programs of these six selected subdivisions receive 43.2% of the State's aid for pupil transportation. (Exhibit 3.)

Through a series of interviews at the national, state, and local levels, the ADL team established the issues relating to public and private ownership of school transportation.

Outside of the State, the members of the ADL team obtained data from the U.S. Department of Transportation, U.S. Office of Education, the National Education Association, and the National Association of School Bus Contract Operators. The State Departments of Education in Florida, Kentucky, Massachusetts, and Ohio also provided information on certain aspects of the study.

Within Maryland, the ADL team had extensive contact at the State level. During the study two workshops were held at the Maryland Inn in Annapolis. These workshops were attended by some thirty participants, primarily contractors and county transportation supervisors, drawn from counties not selected for intensive study. By this means, the study was broadened. Throughout the study contacts were made with members of the legislature, the State Department of Education, the Department of Motor Vehicles, and the Division of Economic Development. Representatives of the case team attended the annual meeting of the transportation supervisors sponsored by the State Department of Education and, also, the annual convention of the Maryland School Bus Contractors Association.

EXHIBIT 3

CHARACTERISITCS OF THE SIX POLITICAL SUBDIVISIONS OF THE STATE OF MARYLAND
SELECTED FOR INTENSIVE STUDY

Local Unit	State Aid for Transportation	Number of Vehicles			Pupils Transported	Enrollment	
		Contract	Publicly Owned	Total		September 1969	September 1970
Anne Arundel County	$2,127,696	362	31	393	45,108	70,842	74,000
Baltimore City	5,102,780	79	115	194	52,863	193,082	192,668
Frederick County	712,272	71	124	195	12,994	18,740	19,389
Garrett County	500,490	98	3	101	5,029	5,460	5,308
Montgomery County	2,720,487	-	447	447	50,248	125,456	125,819
Wicomico County	796,720	146	-	146	10,009	14,487	14,635
Total for the selected local units	11,960,445	756	720	1,476	176,251	428,067	431,819
Remaining 18 local units excluded from intensive study	15,697,178	1,774	1,257	3,031	275,093	463,914	480,084
Total for State	27,657,623	2,530	1,977	4,507	451,344	891,981	911,903
Portion of State totals represented by the selected local units	43.2%	29.9%	36.4%	32.7%	39.1%	48.0%	47.4%

In each of the selected subdivisions ADL staff members interviewed the principal parties involved in pupil transportation to obtain data about:

- The direct and indirect costs of pupil transportation.
- The philosophical assumptions and practices utilized in administering the programs of pupil transportation.
- The extent of school transportation for field trips and other special purposes, and the indirect and direct costs of these trips.
- The adequacy of the State formula for pupil transportation reimbursements.

Our efforts to obtain data about the adequacy of the State formula were only partially effective. Field interviews directed at determining the adequacy of the formula were satisfactory on a qualitative basis. However, quantitative data that would permit revision of the formula were not obtained. Direct interviews proved less than satisfactory, because the contractors who were willing to provide the requested data could not effectively respond to our questions. As is typical with small businesses, the contractors generally do not use a formal system of cost accounting. In a further attempt to obtain the desired data, a questionnaire (Appendix V) was mailed to 344 contractors using a list provided by the Maryland School Bus Contractor's Association. After a period of six weeks only 16 partial or complete replies were received, a 4.7% response ratio that was too low to yield statistically meaningful extrapolations.

Once we had completed the field work, we analyzed statistical and financial data for fiscal 1969-70, the most recent fiscal year for which complete data was available.

II. COSTS OF PUBLIC AND PRIVATE OWNERSHIP AND OPERATION OF PUPIL SCHOOL TRANSPORTATION

A. DEFINITION OF PUBLIC AND PRIVATE OWNERSHIP AND OPERATION

In the most common form of public ownership and operation, the local school board owns the vehicles, and hires all employees such as drivers, aides, and supervisors. The locality dispatches, schedules, and routes the vehicles. It owns the required maintenance facilities, parking and storage areas, service equipment and vehicles, and also maintains an inventory of parts, lubricants, and fuel. The locality's employees direct and perform most of the maintenance work. Usually, major work such as rebuilding engines is contracted to outside vendors. In the terminology of economics this form of public ownership may be described as public ownership with vertical integration. Among the six localities studied, Baltimore City and Montgomery County illustrate this approach.

In addition to public ownership with vertical integration it is possible to have public ownership without vertical integration - this term has been used in this report to describe the less common mode of public ownership. In this case the locality owns the required buses as it does with public ownership. However, rather than integrating backward into the operation and maintenance of the vehicles, the locality contracts with private parties for these services. For instance, the locality may contract with a tire company for tires and road service; a service station for fuel, oil, and routine service; the original supplier of the vehicle for major maintenance; and a driver for its daily operation. The driver often provides for bus storage, assumes the responsibility for scheduling service and maintenance, and qualifies for no more fringe benefits than a contract operator. Having contracted for storage, maintenance, and operation, the locality may not have any facilities other than a minimal parking area for spare and disabled buses. Among the six localities selected for study, Frederick County illustrates this approach in its operation of its publicly owned equipment.

In private ownership and operation, the locality contracts with a private individual to provide transportation services. The contractor provides the driver and bus. He maintains the vehicle, provides for its fueling and storage, and assumes responsibility for providing reliable service (usually by arranging for substitute drivers and spare buses). Some localities assist the contractor by acting as brokers between the contractors and substitute drivers and/or by lending publicly owned buses for spares when they are needed. The contractor qualifies for certain tax exemptions. The contractor's equipment must meet State and local specifications, both at the time of purchase and at later dates when in use.

Most localities limit the number of routes an individual contractor may have. As a result, the typical contractor has three or fewer routes. The localities usually retain the right to supervise, dispatch, schedule, and route the buses as if they were publicly owned. Localities also insist on approving the selection, medical examination, and training of both drivers and substitute drivers. The localities differ as to whether the locality or the contractor is responsible for driver training. Also, the process of selecting contractors differs among the localities. Among the six localities selected for study, Wicomico County illustrates the pure system of private ownership and operation most clearly.

B. METHODOLOGY

This study is predicated on a comparative analysis of the costs of using each of the public and private approaches in each of the six selected localities. The methodology used results in a statement of pro forma costs for the three approaches -- i.e., for public, public without vertical integration, and private operations -- in each of the six localities. The assumptions used in the development of the pro forma costs were based as closely as possible on the actual experience of the 1969-70 school year. Our method for developing and presenting the comparative costs is explained in the following paragraphs.

In only a few cases are the pro forma costs identical with those actually reported or incurred in 1969-70. In practice, there is a mixture of public and private ownership in most localities. In addition the localities often did not report their actual costs as they were incurred. Often the State transportation reports were prepared with an eye toward what costs were allowable and not as a statement of what costs were incurred. Furthermore, the localities uniformly use a cash rather than an accrual basis of accounting. Since the cash approach is also applied with traditional fund accounting, there is a minimum accumulation of indirect costs on a "program" basis. Based on our observations in the six studied subdivisions, we believe major improvement in the management and control of pupil transportation costs would result from a uniform and effective application of Program Planning and Budgeting techniques.

The pro forma costs were developed for each locality in total dollar amounts as if the total package of services (program) delivered in 1969-70 had been delivered by using each of the three approaches. This contrasts in several ways from the previously used approaches which build up and compare the costs of operating individual buses. Several problems exist with the latter approach. Usually the costs ascribed to operating an individual bus include only the direct costs. With public ownership certain indirect costs are incurred to obtain the benefit of lower direct costs.

The recognition of indirect costs implies a need for their allocation to individual buses. This process, in turn, requires an additional series of assumptions that are unnecessary when total program costs are compared.

The use of program costs for the comparison has other advantages. The public, the localities, and the State are interested in their total expenditures and potential savings rather than comparison between per-vehicle, per-pupil, or per-mile costs. In part, such unit costs are determined by local factors other than the existing mode of ownership and operation. Unit costs are affected by routing, by the location of the schools, by enrollment policies and patterns, and by the geographical and topographical features of the locality. For instance, Garrett County, rural and mountainous, differs not only from urban Baltimore City but also from rural Wicomico County. Comparison of costs on a per-vehicle, a per-mile, or a per-child basis is, therefore, not meaningful or significant.

Later in this chapter the pro forma costs for the three approaches are presented for each locality in the following ways:

- Total state aid, i.e., the cash reimbursement due the localities from the State,
- the sum of total State aid and unallowed costs on a cash basis,
- the sum of total State aid and unallowed costs on an accrual basis, and,
- the total of all costs on a comparable, accrual basis.

The statement of the costs for total State aid establishes the cash expense to the State for its reimbursement to the locality. This is the expense that would be recorded with the State's present approach to accounting.

The statement of the sum of total State aid and unallowed costs on a cash basis establishes the cash expense to both the State and the locality. This figure, however, will exceed the sum of the costs that would be attributed in the accounts of both the State and the locality, because many costs not segregated by the localities have been included in the unallowed costs. Unallowed costs are the costs of transportation not allowed by the State in computing its reimbursement to the locality.

The sum of total State aid and unallowed costs on an accrual basis equals the above costs after an adjustment to eliminate capital expenditures and establish a provision for depreciation and amortization. This adjustment eliminates the effect of unusually large or small equipment procurement. In Baltimore City, this factor was significant; $992,624 was spent in 1969-70 to procure equipment.

The total of all costs on a comparable, accrual basis is the result of adding the imputed costs for taxes and interest to the sum of total State aid and unallowed costs on an accrual basis. From the viewpoint of Maryland's taxpayers this presentation states the costs for each form of ownership on an equitable basis. Presumably, the tax revenue not paid by virtue of public ownership is recovered by increasing the tax paid by the remaining body of taxpayers. Therefore, taxes not paid by public enterprises by virtue of their public ownership are a legitimate cost of such enterprises. Also, the financing of capital investment for publicly owned enterprises usually includes the use of debt. Where such investments are financed out of current tax revenues, the taxpayers presumably lose their opportunity to invest such funds until they are needed to amortize the debt involved. The resulting loss of income is therefore an indirect form of taxation beyond the immediate levy. Thus, with either immediate or debt financing, there are logical, theoretical reasons to impute the cost of capital as a legitimate cost of public enterprise.

C. ASSUMPTIONS

The pro forma costs for private ownership assume that the State formula was used to determine the price of contract services. The only exception was in Garrett County where in 1969-70 the County paid contractors a premium of 5% over the State formula. This premium was treated as an unallowed cost for State aid purposes, i.e., a cost which must be borne by the County.

The use of the State formula to determine the price of contract services may be questioned in the cases of Baltimore City and Montgomery County. In Baltimore City, the contracts let for 1969-70 were in excess of the State formula. These contracts were let by bid and presumably reflected the market for contract services. However, the invitation to bid appeared to be so structured as to invite bids higher than would have occurred with a continuing policy of contract operation. The bidders were not provided with the mileage of the routes in question. The contracts were let for an interim period; the City had concurrently embarked on a program of building up its publicly owned fleet. The City retained the right to increase or decrease the number of buses required from each contractor to a maximum of 20 or a minimum of 10.

In the absence of any other data indicative of the market for contract services in Baltimore City and Montgomery County, the use of the State formula appears to be a reasonable assumption. The validity of this assumption is also substantiated by a 1970 ADL study for the Duval County (Jacksonville, Florida) School Board. The County is a coastal urban center with a public school transportation system not unlike that in Baltimore City. In 1969-70, for example, Duval County operated 198 routes and its system

operated 2,100,000 vehicle miles. In 1969-70, Baltimore City operated 166 vehicles and its system operated 1,120,000 vehicle miles. ADL's study showed that Duval's service is obtained at a cost which is competitive with that in other surburban and rural Florida counties. Given the County's comparability with Baltimore City it appeared reasonable to assume that long-term contracts could be established in Baltimore City and Montgomery County on the basis of the State formula.

In developing the pro forma cost of operating buses with public onwership, the experience in Montgomery County for 1969-70 was used as a base. Per-mile costs were developed from the available data for each type of vehicle in the Montgomery County fleet. The pro forma costs of operating under public ownership without vertical integration were based on the 1969-70 experience of Frederick County. Among the selected localities, Frederick County represents the only material illustration of this approach.

Baltimore City was not used as a base for developing pro forma costs in other localities, because of the unique conditions in Baltimore City in 1969-70. Between the 1968-69 and 1969-70 school years, Baltimore City's transportation program increased 22-fold. The City's program naturally reflected the stresses of such a change. The City had its present garage facilities for only part of 1969-70. Several key positions, including that of Director, were vacant during part of 1969-70. Moreover, the City's fleet, which was acquired largely in 1969-70, is composed principally of diesel-powered, transit-style buses. The cost of operating this equipment was significantly higher than the cost of operating gasoline-powered, conventional school buses. Given the situation in the City, the pro forma cost of operating with public ownership was computed by combining the actual cost for public buses in 1969-70 with the pro forma cost of operating publicly owned buses on the routes served by contractors.

The costs developed for the base cases in Montgomery and Frederick Counties were adjusted to compensate for the differences in costs between these two counties and the other localities. This adjustment was made to the portion of the operating costs reflecting labor on the basis of the relationship of driver's salaries (and aides in the case of Wicomico County) among the localities. A comparison with other available data indicated this relationship would be as good an approximation as could be obtained without actually testing the labor market. These data appear as Exhibit 4.

The costs of special transportation via taxis, private autos, and public transportation were assumed to be the same in all three approaches. This assumption reflected field observations that this type of transportation was handled in the most expedient fashion regardless of a locality's policy on bus ownership. In

EXHIBIT 4

INCOME, BUYING POWER, AND WAGES IN
SIX POLITICAL SUBDIVISIONS OF MARYLAND

Political Subdivisions	Estimated Income Per Household in 1971[1] Amount	Index	Estimated Buying Power Per Household in 1969[2] Amount	Index	School Bus Driver's Wages in 1969-70[3] Amount/Hour	Index	School Bus Aide's Wages in 1969-70[3] Amount/Hour	Index	Average of Wages of Four Industrial Occupations[4] Amount/Hour	Index	Average of Last Three Indexes	Average All Indexes
Anne Arundel County	$14,982	69.76	$13,951	91.63	$2.96	82.40	$2.06	78.15	$2.45	91.12	83.89	82.61
Baltimore City	12,129	56.47	8,893	58.41	2.94	81.70	2.00	76.01	2.26	83.96	80.56	71.31
Frederick County	7,589	35.33	8,595	56.45	2.85	79.13	N/A[5]	N/A[5]	2.28	84.89	82.01[6]	63.95[6]
Garrett County	7,456	34.71	5,969	39.21	2.71	75.50	1.92	72.84	2.03[7]	75.62[7]	74.65	59.58
Montgomery County	21,478	100.00	15,225	100.00	3.59	100.00	2.63	100.00	2.69	100.00	100.00	100.00
Wicomico County	12,962	60.35	8,569	56.28	N/A[5]	N/A[5]	2.21	84.12	2.19	81.36	82.74[6]	70.53[6]

NOTES:

1. Source: "1971 Editor and Publisher Market Guide," Editor and Publisher Co., Inc. New York, New York.
2. Source: "Sales Management," The Marketing Magazine, 1970 Survey of Buying Power, Sales Management, Inc., New York, New York.
3. Source: Unpublished County Reports to the Maryland State Department of Education.
4. Source: Maryland State Department of Labor and Industry, representative wages for May, 1970, for the following occupations:
   - Fork life operator
   - Maintenance machinist
   - Shipping/receiving clerk
   - Production trainee (entry level)
5. N/A - data not available or applicable.
6. Calculation made with available data.
7. Calculation made for three occupations, i.e., maintenance machinist, shipping/receiving clerk, and production trainee (entry level).

Baltimore City, it was assumed that the use of the Baltimore Transit Company (BTC), now the Metropolitan Transit Authority (MTA), remained unchanged under the three approaches. The use of the MTA appears to be a practical and reasonable means to move older and secondary school children to a myriad of destinations. First, these children living in an urban environment, have to learn to use mass transportation in their daily life. Second, the addition to the city's streets of the large fleet of school buses, which would otherwise be needed, would add to Baltimore's traffic congestion in the peak morning hours.

Costs for indirect personnel, i.e., supervisors, clerks, and driver trainers, were developed by establishing in each locality a pro forma table of organization for the three approaches. On a similar basis, a schedule of related assets was developed in each locality under the three approaches. The tables and schedules reflected what needs were evident from an examination of the base cases, i.e., Montgomery and Frederick County.

The size, nature, and cost of vehicle fleets were established by assuming the fleets in service in each locality were used with each of the three approaches. In the cases of public and public ownership without vertical integration, this required the assumption of a provision for spare buses; a 10% margin was taken. Since fleet owners obtain their vehicles in large numbers, they do so at a lower unit cost than does the small operator. Public owners also benefit from the special discounts customarily allowed governmental agencies. To accomodate this fact, the required investment in buses was estimated, at different levels, for public and private owners. The pro forma costs of publicly and privately owned buses were based on an analysis of the historical acquisition costs of publicly and privately owned buses.

Only the most common equipment, the 60-passenger conventional school bus, offered an opportunity for a satisfactory comparison among the six selected localities, and even here, both Garrett County and Baltimore City data must be excluded. Garrett County reports the allowed cost of contractor buses at the maximum allowed by the State formula rather than at cost, which is usually higher. Baltimore City operates only one unmodified 60-passenger bus. The equipment in the remaining four counties is considered functionally equivalent. The cost comparisons shown in Exhibit 5 are, therefore, considered as fair as is possible with the circumstances.

Exhibit 5 shows that the acquisition cost of public buses ranges from 61% to 92% of the acquisition cost of contractor owned equipment. Between 1960 and 1966, the relationship remained essentially constant, but from 1967 on the percentage climbed steadily to a high of 91.69% in 1969.

EXHIBIT 5

Comparison of the Acquisition Cost of Publicly Owned 60-Passenger School Buses with the Reported Allowed Cost of Contractor Owned Buses in Anne Arundel, Frederick, Montgomery, and Wicomico Counties.

Model Year	Publicly Owned Buses, Number	Publicly Owned Buses, Unit Cost ($)	Contractor Owned Buses Number	Contractor Owned Buses Unit Cost ($)	Unit Cost of Publicly Owned Buses as % of the Unit Cost of Contractor Owned Buses
1960	9	4,252	31	6,950	61.18%
1961	67	4,464	34	7,074	63.10
1962	42	4,646	48	7,069	65.72
1963	39	4,865	69	7,255	67.06
1964	44	4,607	38	7,203	63,96
1965	46	4,666	32	7,123	65.42
1966	45	4,678	41	7,048	66.37
1967	61	5,789	37	7,380	78.44
1968	11	6,378	42	7,771	82.07
1969	72	7,270	47	7,929	91.69

Source: County Reports to the Maryland State Department of Education.

The acquisition costs are becoming more nearly comparable because, chassis manufacturers have curtailed discounts to public fleet buyers since 1967. The body manufacturers have continued to give a discount. Whether the chassis discount will be reestablished is not known.

In the computations supporting the pro forma costs, the following relationships were used.

Model Years	Unit Cost of Publicly Owned Buses As % of the Unit Cost of Contractor Owned Buses
1960 through 1966	64.69%
1967	78.44
1968	82.04
1969	91.69

The fleet and other equipment were depreciated and amortized by the straight-line approach. Depending on the vehicle type, vehicles were amortized over 5, 10, and 15 years using a 10% salvage value. Office and other equipment were amortized over a life of 5 years without using any salvage value. Buildings, household improvements, and site development costs were amortized over 25 years without using any salvage value. Book value was calculated at mid-year as if all assets were procured at July 1 of the year of their acquisition.

Costs for employee fringe benefits were developed in accordance with the individual locality's practice. Where this was not done, as in the case of Garrett and Wicomico Counties, comparable employee benefits and costs were assumed. In Baltimore City and Montgomery County transportation employees have an extensive package of fringe benefits not found in the other selected localities. The full costs of these benefits were included in the pro forma cost of these two localities. Baltimore City is alone among the selected localities in that it employs its drivers for 40 hours per week, 52 weeks per year. The drivers duties include maintenance of the buses, driving for field trips, and other work. The cost of this labor is allocated by city and not charged to pupil transportation. This allocation by the city was accepted for the purpose of this study.

The cost of the capital employed by the localities was estimated at 6% of the depreciated book value at January 1, 1970. Although 6% was below the prevailing prime rate during 1969-70, it approximates the taxpayer's opportunity rate with many fixed income investments such as savings accounts and bonds. Also, 6% was used as the cost of capital in the 1969-70 State formula.

Imputed taxes were calculated from the prevailing 1969-70 applicability and rates. Note, however, that the pro forma costs for public ownership include no charge for:

- federal excise tax on vehicles,
- federal motor fuel tax, and
- state motor fuel tax.

Both public and private operators are exempt from the federal excise tax on school buses and from the federal motor fuel tax (Exhibit 6). However, contractors largely fail to take advantage of the exemption from federal motor fuel tax. Nevertheless, this oversight does not justify charging public operators for the cost of an imputed federal motor fuel tax.

Both public and private operators pay the state motor fuel tax. This fact of the law appears unique to the State of Maryland.

D. COSTS

Using the methodology and assumptions described above, we developed four sets of pro forma costs (Exhibits 7-10). The schedules of computations supporting these costs appear in Appendices VI through XI.

Totals for the five counties are included because the 1969-70 school year was an unrepresentative period to use in evaluating Baltimore's program. As noted earlier, 1969-70 was a year of remarkable change for the City's program. Undoubtedly, the change resulted in costs the City otherwise would not have incurred. Baltimore City may also be viewed as an exception on other accounts. It is the only major core city in Maryland. It is the only political subdivision depending on mass transportation to provide much of its pupil transportation.

The pro forma costs of total State aid, Exhibit 7, demonstrate why the State Department of Education asserts that public ownership costs less than private ownership of pupil transportation. Given the present policies on reimbursement of transportation costs by the State, public ownership would result in a smaller reimbursement in all of the studied localities, except Baltimore City. For the five counties studied, the reimbursement with public and public ownership without vertical integration, would be 89.7% and 90.2% of the reimbursement with private ownership. The reimbursement in the case of Baltimore City is inflated by an extraordinary expenditure in 1969-70 of $992,624 for vehicles. This amount exceeds the $946,514 difference between Baltimore's pro forma State aid with public and private ownership.

EXHIBIT 6

Gasoline Tax Exemption

Many of you have written about the gasoline tax exemption and the legality of it so we are printing the following data which you can take to your school board.

SPECIAL RULINGS 1.11 GASOLINE TAX Rev. Rul. 59–319, C. B. 1959–2, 311 21. *"School District's Purchase of Gasoline For Use by a Contract Carrier."*

The sale of gasoline to a school district to be furnished without charge to a contract carrier for use in the performance of a contract with the school district transportation of school children to and from school under circumstances where the pumps which dispense the gasoline are installed and operated on the premises of the contract carrier, is regarded as a sale to a state or local government for its exclusive use. Such sales are exempt from tax provided they are supported by properly executived exemption certificates furnished by the school district."

Special trips and other trips for athletics, bands, etc. should be considered non-exempt.

Source: Newsletter of The National Association of School Bus Contract Operators, May, 1971.

EXHIBIT 7

PRO FORMA COST OF TOTAL STATE AID
WITH PUBLIC AND PRIVATE OWNERSHIP
1969-70

Political Subdivision	Public Ownership: With Vertical Integration	Public Ownership: Without Vertical Integration	Private Ownership
Anne Arundel County	$1,879,831	$1,967,072	$2,162,185
Baltimore City	4,779,213	4,701,908	3,832,699
Frederick County	661,821	637,821	817,213
Garrett County	389,068	381,168	501,938
Montgomery County	2,769,934	2,683,775	2,814,017
Wicomico County	695,863	694,394	796,720
Totals for Six Subdivisions	$11,175,730	$11,066,138	$10,924,772
Totals for Five Counties	$6,396,517	$6,364,230	$7,092,073

EXHIBIT 8

PRO FORMA COST OF TOTAL STATE AID AND UNALLOWED COSTS (CASH BASIS) WITH PUBLIC, AND PRIVATE OWNERSHIP

1969-70

Political Subdivisions	Public Ownership		Private Ownership
	With Vertical Integration	Without Vertical Integration	
Anne Arundel County	$2,127,474	$2,163,435	$2,193,520
Baltimore City	5,449,066	5,275,168	3,980,759
Frederick County	811,003	753,646	875,282
Garrett County	458,616	415,666	531,396
Montgomery County	3,692,596	3,498,094	2,966,566
Wicomico County	798,280	765,884	808,927
Totals for Six Subdivisions	$13,117,035	$12,871,893	$11,356,450
Totals for Five Counties	$7,887,969	$7,596,725	$7,375,691

EXHIBIT 9

PRO FORMA COST OF TOTAL STATE AID AND UNALLOWED COSTS (ACCRUAL BASIS) WITH PUBLIC, AND PRIVATE OWNERSHIP

1969-70

Political Subdivisions	Public Ownership		Private Ownership
	With Vertical Integration	Without Vertical Integration	
Anne Arundel County	$1,938,466	$1,974,427	$2,193,520
Baltimore City	4,618,508	4,440,610	3,980,759
Frederick County	773,355	715,998	875,282
Garrett County	410,699	371,616	514,184
Montgomery County	3,331,577	3,289,718	2,966,566
Wicomico County	721,000	688,605	808,927
Totals for Six Subdivisions	$11,793,605	$11,480,974	$11,339,238
Totals for Five Counties	$7,175,097	$7,040,364	$7,358,479

EXHIBIT 10

PRO FORMA TOTAL COSTS ON A COMPARABLE
ACCRUAL BASIS WITH PUBLIC AND PRIVATE OWNERSHIP
1969-70

Political Subdivision	Public Ownership		Private Ownership
	With Vertical Integration	Without Vertical Integration	
Anne Arundel County	$2,118,478	$2,139,065	$2,195,032
Baltimore City	4,840,267	4,647,519	3,983,733
Frederick County	844,717	778,954	876,698
Garrett County	452,493	405,660	516,191
Montomgery County	3,592,145	3,525,651	2,974,158
Wicomico County	799,738	758,088	809,832
Totals for Six Subdivisions	$12,647,838	$12,254,937	$11,355,644
Totals for Five Counties	$7,807,571	$7,607,418	$7,371,911

The pro forma costs for total State aid and unallowed costs on a cash basis, (Exhibit 8), illustrate a major difference between the costs for Baltimore City and Montgomery County and the costs for the other studied localities. Both Baltimore City's and Montgomery County's costs for public operation reflect the following differentiating elements:

- higher wages,
- more comprehensive and more expensive packages of employee fringe benefits, and
- higher expenditures for capital outlay facilities.

The first two elements appear to reflect the more complete organization of labor common to urban areas. The third element is a major element of indirect cost which is presumably incurred with public ownership to achieve lower direct costs of operation.

The relationship of total State aid to the total of State aid and unallowed costs, i.e., the relationship between the costs tabulated in Exhibits 7 and 8, should be noted. Private ownership appears to result in the reimbursement of a larger portion of pupil transportation costs than does public ownership of either type; that is, the local share of costs is less with private ownership. This fact, which is illustrated below, no doubt has tacitly encouraged local use of contractors:

Percent of State Aid to the Total State Aid and Unallowed Costs on a Cash Basis

	Public Ownership		
	With Vertical Integration	Without Vertical Integration	Private Ownership
The Six Subdivisions	83.6%	85.0%	96.1%
The Five Counties	81.0%	83.7%	96.1%

From the taxpayer's point of view, the comparison of pro forma costs shown in Exhibit 10 is the most relevant. This comparison includes all theoretically justified costs and matches them equitably on an accrual basis. The relationship among the total costs is stated in Exhibit 11. Given the acceptability of using the State formula to establish the cost of contract operation in Baltimore City and Montgomery County, two principal conclusions are evident from the analysis:

EXHIBIT 11

RELATIONSHIP OF PRO FORMA TOTAL COSTS OF PUPIL TRANSPORTATION STATED ON A COMPARABLE ACCRUAL BASIS WITH PUBLIC AND PRIVATE OWNERSHIP

1969-70

Political Subdivision	Percent of Cost with Private Ownership		
	Public Ownership		
	With Vertical Integration	Without Vertical Integration	Private Ownership
Anne Arundel County	96.5%	99.4%	100.0%
Baltimore City	121.5	116.6	100.0
Frederick County	96.4	88.9	100.0
Garrett County	87.7	78.6	100.0
Montgomery County	120.7	118.5	100.0
Wicomico County	98.8	93.6	100.0
Totals for Six Subdivisions	111.3%*	107.9%*	100.0%*
Totals for Five Counties	105.9%*	103.1%*	100.0%*

*Computed as appropriated weighted averages.

- public ownership is not uniformly more economical throughout the State, and

- the economic advantage of one approach versus another is so narrow, i.e., less than 5%, in some cases that it might be regarded as immaterial.

III. FIELD TRIPS AND OTHER USES OF PUPIL TRANSPORTATION PERSONNEL, EQUIPMENT, AND FACILITIES

The previous chapter dealt with pupil transportation in a strict sense. That is to say, the pro forma costs were stated for pupil transportation per se insofar as it was possible to isolate them. This chapter addresses the related problem of field trips and their cost.

There can be no doubt that field trips and other joint uses of transportation equipment and facilities are a closely related problem. Parents think of education as a package which includes extracurricular activities. Acculturation and character development are often predicated upon group experiences such as athletic events. Field trips also often substitute for other educational experiences. For example, a trip to Washington may be far more effective educationally than any number of films on the same subject.

Field trips have also been an important element in the controversy surrounding public versus private ownership of pupil transportation. Representatives of the Maryland School Bus Contractors Association have asserted that with public ownership, educators have a tendency to schedule more field trips than they do with private ownership. The Association asserts that this factor makes public ownership more expensive to the taxpayers and parents. The Association's representatives also believe that public ownership encourages trips which are not justified educationally.

The Maryland School Bus Contractors Association alleges unequal treatment exists in regard to the costs of field trips. Specifically, the Association asserts that with public ownership the full cost of field trips often is not charged to the users. Therefore, in its reimbursement of transportation costs, the State absorbs part of the cost of such field trips.

This study reflects two positions in regard to these questions. First, we have not attempted to determine whether or not field trips are justified educationally. To do so would entail a larger study of a significantly different character. Second, we do not believe it is possible to objectively determine that the usage of field trips is increased with one or another form of ownership and operation.

The study did establish that the studied localities using public ownership have not used a uniform approach to account for the cost of field trips. In at least one county, the State has undoubtedly absorbed a portion of the costs of field trips.

The problem of field trips is part of a major issue in regard to the allocation of costs between pupil transportation and other programs. This problem exists wherever there is joint use of personnel, equipment, and facilities. We recommend that the State Department of Education develop and promulgate rules for the accounting of costs whenever and wherever there is joint use of personnel, equipment and/or facilities. These rules should use generally accepted cost accounting practices to allocate the costs among such uses.

A. THE EXTENT OF FIELD TRIPS WITH PUBLIC AND PRIVATE OWNERSHIP

It was not possible to determine the extent of field trips in the selected localities during the 1969-70 school year. Of the six localities studied, Baltimore City appeared to maintain the best accounting for the joint use of its vehicles. The City determines the total mileage applied to each vehicle in its fleet for pupil transportation and for other usages. Montgomery County makes no effort to account for the total mileage of field trips. The County, in this case, charges by the hour for the use of its vehicles. Frederick County charges by both the miles and hours involved. In the remaining localities, little or no effort was made to accumulate field trip data.

Beyond the lack of adequate data, it is difficult to conceive of a theoretically valid approach for objectively determining whether field trips would increase as a result of public ownership. Educational philosophy obviously determines the role, number, and extent of field trips. Since educational philosophies vary widely among the political subdivisions of the State, county-to-county comparisons of the frequency of field trips would not, in itself, be a theoretically valid demonstration. Furthermore, in an examination of a single county, it is impossible objectively to determine the impact of ownership on the number of field trips, because the use of one form of ownership precludes any other form.

The field interviews did illustrate that educators generally find it more convenient to schedule field trips with publicly owned buses. Partially for this reason, several counties in the State own a limited number of school buses. However, the extent to which this tendency increases the number and extent of field trips in these counties is unknown, and probably impossible to determine.

B. ACCOUNTING FOR FIELD TRIPS AND OTHER JOINT USES

Baltimore City, Montgomery County, and Frederick County use different approaches to accounting for field trips and other joint uses of transportation personnel, equipment, and facilities.

Baltimore City's tabulation of its mileage for pupil transportation and field trips is used to prorate operating and maintenance costs to the State and City. This allocation includes all principal direct costs including garage labor, outside maintenance, fuel, oil, lubricants, tires, and parts. The cost of the drivers' wages and fringe benefits are charged to the State or the City on the basis of a time reporting system. However, overhead costs or amortization of vehicles and equipment are not allocated between the two. Field trips account for approximately 14% of the City's total fleet mileage.

Montgomery County charges a flat $3.75/hour for driver and use of the bus. The $3.75 charge fails to equal even the most obvious direct costs of operation. In 1969-70, the average driver wage was $3.59/hour. In addition, the County has a fringe package costing 13.13% of a driver's basic wages. Wages and fringe benefits in 1969-70 equaled $4.06/hour. We estimate the County's 1969-70 field trip mileage at 540,000 miles. Using an average for the other costs of operation, this implies the State absorbed at at least $65,000 in costs which are logically attributable to field trips. Any allocation of the cost of overhead to the field trips would, of course, increase the estimate.

Frederick County charges 20¢/mile and $2.00/hour for the use of its buses on field trips. This charge fairly reflects the cost of such use. The County pays its drivers $2.00/hour for this work. The 20¢/mile charge for usage exceeds the County's average cost of operation by more than 75%. It thus permits the County and hence the State, to recoup the implicit costs of employee fringe benefits and other overhead.

The above illustrates the lack of consistency in accounting for joint usage of transportation personnel, equipment, and facilities. A similar situation exists where a county's pupil transportation department maintains other public vehicles. The lack of uniformity results from the State's failure to promulgate, and enforce by audits, rules that would require uniform and adequate treatment of such items. We recommend that the State Department of Education have rules developed for accounting for such costs. These rules should be consistent with generally accepted accounting practices.

IV. SAFETY

The issue of pupil safety is emotionally-charged. Undoubtedly, safety must be the most important consideration during any review of pupil transportation. Concomitantly the issue is important in comparing public and private transportation. Unfortunately, the relationship, between public and private ownership and the incidence of accidents, cannot be determined with certainty. There is evidence which suggests:

- that the same factors affect safety with both forms of operation; and
- that with either form a comparable safety record may be achieved.

A. ATTEMPTS TO CORRELATE ACCIDENTS WITH FORM OF OWNERSHIP

Before the Avara Commission, the representatives of the Maryland School Bus Contractors Association testified with evidence supporting their contention, that privately owned buses were "safer"; that public buses had more accidents (Appendix XII).

The Maryland State Department of Education submitted its rebuttal before the Avara Commission (Appendix XIII). The Department pointed out the discrepancies in accident reporting within the State. The Department stated that, since the reporting of non-fatal accidents varied within the State and since all fatal accidents were reported, the relative safety of contract and publicly owned buses should be assessed in terms of fatal accidents. The Department maintained that contract operations had experienced more accidents than public operations. Specifically, the Department noted that 11 of the 15 school bus fatalities in Maryland from 1959 to 1968 had involved contractor-owned buses.

B. THE UNSATISFACTORY NATURE OF SUCH ATTEMPTS

The above attempts to correlate accident rate with type of ownership are spurious because:

- the simple correlations identified did not attempt to correct for the extent of accident exposure or for its character;
- the variations in reporting practices within the State was not recognized;
- the nature and extent of the information at the local level was not considered; and
- the approaches used did not recognize the probability that the apparent correlations may reflect other factors unrelated to either form of ownership.

For example, the representatives of the Maryland School Bus Contractors Association related the total number of accidents to the nature of ownership without considering the total number of miles travelled or the character of the roads. Montgomery County's publicly owned buses travelled about 5.7 million miles in 1969-70, and were involved in 183 accidents, i.e., 32.2 accidents per million miles. Anne Arundel County's predominantly contract buses travelled an estimated 4.8 million miles in 1969-70, and were involved in 97 accidents, i.e., 20.2 accidents per million miles. Interpretation of these data requires a further adjustment for the nature of exposure found in the two Counties. For instance, it is known that ordinary rural roads are the most dangerous per mile of travel (Exhibit 12). An adequate analysis of raw rates of incidence requires a further study of the nature and seriousness of the accidents. If the seriousness of the accidents is considered in the previous comparison, the apparent relationship between the two Counties is changed. In 1969-70, the largely contract fleet in Anne Arundel County was involved in accidents which injured 38 persons (25 in school buses, 13 in other vehicles), i.e., 7.9 injuries per million miles. In 1969-70, the publicly owned buses in Montgomery County was involved in accidents which injured 30 persons (21 in school buses, 9 in other vehicles), i.e., 5.3 injuries per million miles.

The State's summaries of school bus accidents (Appendix XIV) show that analysis must take into account the difference in accident reporting practices in the State. The situation was described by representatives of the State Department of Education in their testimony before the Avara Commission (Appendix XIII). Our field interviews throughout the State confirmed the Department's contention that accident reporting does vary widely.

There is reason to believe that not all the necessary information for a careful, meaningful analysis exists within the State. In statistical tabulations and literature, one finds the statement that an accident was "caused" by some factor, e.g., skidding. The term "cause" used in this context is confusing because it implies a single contributing factor. This is not true of most traffic accidents, because a combination of human, vehicle, and environmental factors are usually responsible. The nature and extent of the data on school bus accidents in Maryland at the State and local levels are not sufficient to yield such information.

In 1969, the Maryland State Department of Education studied school bus injury reports from Maryland and 15 other states. A major finding was that:

EXHIBIT 12

RELATIVE FREQUENCY OF FATALITIES PER MILE OF TRAVEL BY MOTOR VEHICLES[9]

Type of Travel	Index
Urban	100[a]
Rural	230
Interstate	79

a. base of index.

[9] Arthur D. Little, Inc., "The State of the Art of Traffic Safety, A Critical Review and Analysis of the Technical Information on Factors Affecting Traffic Safety," Cambridge, Mass., June 1966.

"School bus accident records which are regularly kept and accident reports which are regularly submitted to various agencies collecting such data are not likely in the near future to yield the desired information on causes of school bus accidents and injuries."[10]

A 1967 study by the National Commission on Safety Education[11] yielded a similar finding.

None of the attempts to establish correlations have taken into account the effects of factors, unrelated to the form of ownership; an apparent correlation between two functions does not necessarily indicate a cause and effect relationship. In 1966, an extensive ADL study of the factors affecting traffic safety[12] identified 31 major categories of contributing factors in 5 broad categories (Exhibit 13). The study was one of the most thorough reviews of the existing domestic and pertinent foreign literature on the causes and prevention of motor vehicle accidents. The nature of ownership of a motor vehicle was not found to be a major or minor contributing factor of motor vehicle accidents. The nature of the factors listed on Exhibit 12 suggests that their effects on the safety of a motor vehicle, are unrelated to ownership.

There is other, less tangible evidence that ownership is not necessarily an obstacle to safe operation. U.S. scheduled airlines operate with an excellent safety record. This record is achieved through the close cooperation of the private airline industry, the FAA, and the CAB. There are similar, but less striking examples true of trucking, rail, and interstate bus lines. One would think that the State should be able to achieve safe and acceptable pupil transportation, regardless of ownership.

C. THE NEED FOR IMPROVEMENT IN SAFETY

Although the State's present safety record is commendable, its driver training and safety programs need to be improved.

Under the present policies the responsibility for driver training is ambiguous. In some cases, the school boards have assumed this responsibility. In other cases, it is assumed that the contractors are to provide trained, qualified drivers. This ambiguity has led to wide disparity among pre-service and in-service training programs. It has also been a concern of the contractors.

---

10 "A Study of the Availability and Nature of Information on Schoolbus Accidents Recorded at the Local Level," Prepared for Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C., by Maryland State Department of Education, Baltimore, Maryland, 1969, page 7.

11 page 244, "Study of School Bus Safety," National Commission on Safety Education, Washington,D.C., 1967/

12 Arthur D. Little, Inc., op cit.

EXHIBIT 13

CONTRIBUTING FACTORS AFFECTING MOTOR VEHICLE SAFETY

Human Factors - Initiation Phase

I. Biographical Factors
II. Driving As A Skill
III. Medical Factors
    A. Diseases
    B. Physiological Impairments
    C. Drugs and Chemical Agents
    D. Alcohol
IV. Personality Factors
V. Driver Education
VI. Pedestrians

Environmental Factors - Initiation and Impact Phase

I. Physical Factors
    A. Roadway
    B. Roadside
    C. Road Discontinuities
II. Informational Factors
    A. Visibility
    B. Communications and Signaling
III. Operational Traffic Control Factors

Vehicular Factors - Initiation Phase

I. Sensory Factors
II. Layout Factors
III. Dynamic Control Factors
IV. Vehicle Condition Factors (excluding brake and tires)
V. Brakes and Tires

Vehicular Factors - Impact Phase

VI. Impact Phenomena
VII. Injury Tolerances
VIII. Vehicle Occupant Protection Factors
IX. Pedestrian Protection Factors
X. Motorcyclist Protection Factors

(continued)

EXHIBIT 13 (continued)

Loss-Limiting Factors - Post Accident Phase

Regulatory and Legal Factors

I. The Alcohol Hazards
II. Enforcement
III. Driver Penalization and Improvement
IV. Driver Licensing
V. Compulsory Vehicle Inspection
VI. Vehicle Regulatory and Legal Trends
VII. Insurance

State expenditures on school bus driver training are minimal. Although several staff members are assigned at the State level to driver training, none of the Department of Education's staff have been regularly assigned full time to school bus driver training. The State Department of Education has not made definitive recommendations as to how training programs are to be implemented at the local level.

Under the current policies, a driver qualifies for a $.50-per-day premium wage, if he has participated in a minimum training program. Assuming the minimum 180-day school year, this premium equals $90 per year for each qualifying driver. It takes only 2 hours of formal training a year to qualify for the premium. Since the driver is authorized to be paid $2 per hour for participation in a training program, the State may, in some cases, be paying an effective wage of $47 per hour for participation in a patently inadequate 2-hour program of in-service training.

The localities generally do not use funds available for driver training. The present State policies allow an annual reimbursement for such programs of $60 per vehicle, i.e., $10 for materials, and $50 for driver participation. The following table summarizes the level to which each of the studied localities made use of this provision in 1969-70.

	Expenditures in 1969-70 for Driver Training	Maximum State Allowance for Driver Training	Portion of Maximum State Allowance Used
Anne Arundel County	$ 4,944	$23,460	21.1%
Baltimore City	none	9,960	none
Frederick County	1,754	9,960	17.6
Garrett County	399	6,060	6.6
Montgomery County	16,652	26,520	68.8
Wicomico County	43	8,760	0.5
Totals	$23,792	$84,720	28.1%

Source: Unpublished County reports to the Maryland State Department of Education.

To our knowledge, the State has not implemented any organized testing of school buses to determine their safety. The present State school bus specifications are based on an interpretation of the literature, accumulated experience, and professional judgment. Recent Federal accident studies have raised questions on such issues as the structural integrity of present school buses. The State, however, has no definitive program of sound research to establish scientifically the appropriate specifications.

The State's procedure for investigating fatal school bus accidents is admittedly inadequate if its intent is to determine meaningfully the reasons for school bus accidents.[13]

D. RECOMMENDATIONS FOR IMPROVEMENT

We recommend the following changes in the State's approach to school bus safety:

- The State should on a reasonable basis assume the administrative and financial responsibilities of driver training. However, private and public operators should be limited as to the extent of training provided for themselves and for their employees, i.e., no more than that normally required without excessive employee turnover. Operators with requirements beyond this limit should have to fund training of an equivalent quality.

- The State Department of Education should be funded to provide the required training.

- The State Department of Education should set definitive requirements for pre-service and in-service driver training. Pre-service training should include approximately 40 hours of training, half on the road and half in the classroom. Pre-service training should be followed by written and road examinations administered by an independent party, e.g., an employee of the Department of Motor Vehicles. Annual in-service training should include at least 16 hours of classroom instruction.

- Any premium wage paid to drivers should be predicated on satisfactory participation in at least 16 hours of training per year.

- The State Department of Education should alter its policies governing reimbursement of transportation costs so that the political subdivisions of the State are reimbursed for the employment of an adequate number of driver trainers.

---

[13] U.S. Office of Education and the Maryland State Department of Education, op cit.

- The State Department of Education should be funded to implement a program of school bus injury research as outlined in its report to the U.S. Office of Education.[14]

- The State Department of Education and the Division of Motor Vehicles should be funded to study possible improvements in school bus specifications and inspection. The Department and the Division might contract with Maryland's institutions of higher education for certain phases of this research.

---

[14] U.S. Office of Education and the Maryland State Department of Education, op cit.

V. LOCAL OPERATING PRACTICES AND PHILOSOPHIES

A wide disparity in operating practices and procedures exists among almost all of the studied localities. This disparity has been encouraged by minimal State control and coordination of detailed operating practices. Only during the last year has the State extended its desk review of the localities' requests for reimbursement to include a field audit of their propriety. The State only episodically carries out administrative audits of the localities' programs. We understand that one locality thwarted the purpose of such a review by simply not implementing the recommendations. Under the present law, the State has had to keep financing this locality's program. There is an obvious incongruence between local autonomy, minimal State administration, and full State funding. We believe this issue to be more important to efficient administration of the State program than that of public versus private ownership.

Besides the issue of public versus private ownership, the most significant disparities among the localities exist in:

- scheduling;
- equipment procurement; and
- administration.

A. SCHEDULING

Staggering the opening of schools normally has a major impact on costs. The primary costs of school bus operation are involved in placing a bus on the road. Due to the minimum daily wage (usually for three hours) which must be paid to attract drivers, the incremental costs of additional mileage is usually a third of average per mile operating cost. Bus transportation of only one load of children perhaps requires 45 minutes. Where school openings are staggered, two or three trips may be achieved without exceeding the drivers' minimum three hours. Success in this fashion reduces the number of buses to one-half or one-third of the number otherwise required. This reduces not only the required investment, but also storage and other overhead costs.

Why, then, are not all localities staggering the opening of their schools? The localities do not pay for the added costs of not staggering and some parents prefer a uniform opening of all schools. Staggered hours are inconvenient for some parents. This inconvenience is obvious when children in the same home depart for school some 45 minutes apart.

Of the localities studied, only Baltimore City, the largest, and Garrett County, the smallest, had uniform opening hours. Of the two, Baltimore City's uniform hours appear less logical. Even though over 75% of Baltimore's transported children ride the MTA, it would seem reasonable to stagger school opening. It would not only mitigate the coincidence of student transportation with the City's peak morning commuting hours but also increase the use of the City's publicly owned fleet. The City's school buses now carry only one load of children each morning and afternoon.

Garrett County's use of uniform hours seems logical. The sparsely populated County is in the Appalachian Mountains, whose topographical features make routing difficult. In the remote areas of the County, it is almost essential to bring pupils in private automobiles to paved roads. The difficulty of recruiting drivers for such duty almost precludes second trips. For just this reason the County has adopted all-day kindergartens. This certainly exemplifies a locality which incurs an additional cost in its educational program to reduce transportation expenditures.

Wicomico County presents another issue in regard to routing and scheduling. As a matter of policy, the County routes its buses (all contract) so that there are five empty seats available on each bus, to permit the contractors to help each other out if a bus breaks down. However, it also increases the number of routes required.

Given the scheduling of school hours, each County proceeds with routing and scheduling in its own fashion. The location of children to be transported is usually marked on large maps. The routes are then scheduled by judgment and the use of a map wheel. If contractors are used, their base location becomes important. None of the studied subdivisions used computers to assist in scheduling.

The State Department of Education should be encouraged and funded to study computer-assisted routing and scheduling. Such techniques have been applied for over a decade and there is considerable experience which shows that such an approach can reduce costs. With few exceptions, the localities do not have the capability to perform such research. Furthermore, the present reimbursement policy provides the localities with no incentive.

B. EQUIPMENT PROCUREMENT

Presently, each locality determines the extent to which the school bus specifications in its locality exceed those of the State. Apparently, each transportation supervisor has exercised this prerogative somewhat. The disparity of opinion among the supervisors and hence among the local specifications has thwarted all attempts at State pool purchasing. Florida is a key example of other states whose pool purchasing of school buses has led to significant savings in procurement. Besides the effect on

procurement of publicly owned buses, the disparity among local specifications also affects the contractors. The contractor can find himself in the inconsistent position of being compensated on the basis of a State formula while having to provide equipment for which procurement costs exceed the maximum State allowance, due to local specifications.

Within the studied localities, the largest deviations from the norm occurs in Baltimore City and Garrett County. Baltimore is the only area which has adopted the 73-passenger, diesel-powered, transit-style bus as its basic equipment. In 1970, this bus costs $13,500-$15,500 per unit as compared to $7500 for a 60-passenger, conventional school bus. Presumably, the City's equipment choice was justified locally. A serious question still remains as to how far local preferences should dictate equipment choices when the State funds the entire procurement cost.

In the case of Garrett County, the County's specifications appear to reasonably reflect the County's climatic and topographic conditions. These are the most severe in the State. The County specifies additional heaters, dual-paned windows, sanders, three side rails, and heavy-duty axles as standard equipment. The State has agreed to allow $225 towards the cost of these items. Otherwise, the State incurs no cost for the additional equipment which may add 15% or more to the bus cost. The County itself compensates its contractors for the additional costs by paying a 5% premium over the State formula.

Given the disparity among local specifications and the perceived benefits of pool purchasing, the State Department of Education should encourage the development of common specification and pool purchasing. Common specifications are most important, because their development must precede the implementation of pool purchasing. We recommend that the State begin research to determine scientifically the most economically beneficial specifications, while developing the initial set of specifications. The research may involve controlled experiments carried out with cooperating localities and Maryland's institutions of higher education. Due to the close relationship of this research with that recommended in the previous chapter, we suggest the State's efforts in this direction be coordinated with the safety effort. A committee on bus specifications now exists; it should be expanded to include a representative of the State Division of Motor Vehicles. The Committee should also be made into a permanent body to coordinate and complete the work on specifications. These proposed changes need specific funding; 1% of the State's expenditure for school buses represents an initial level of funding which we believe may be recouped in future savings. The possibility of obtaining Federal research funds for these purposes should not be overlooked.

C. ADMINISTRATION

A wide range of administrative practices were found in the localities studied. The State Department of Education has intended to issue a manual of recommended practices and procedures for transprotation supervisors. Apparent limitations in funding and personnel have precluded even this modest effort. It is, therefore, not surprising that the localities' autonomy is responsible for their diversity in administrative practices.

Employment of drivers is the most uniform procedure. The localities studied all followed generally the same practices of obtaining employment histories, checking references, requiring medical examinations, and researching applicants' driving and criminal records.

A major difference between localities is their handling of contractor relations. The process of awarding contracts varies considerably. Baltimore City lets its contracts to the lowest bidders, while reserving the right to reject all bids as too high. The remaining localities studied awarded their contracts without bid. When Frederick County reversed its policy of not awarding new contracts, it advertised for and accepted applications. Based on a careful screening and evaluation, it awarded contracts to the successful applicants. Wicomico County has for some time treated qualified applicants on a first-come, first-served basis. The County is divided into five zones. When a contract is to be awarded in a zone, the route is offered to the qualified individual with the earliest dated application. Some recipients have successfully kept applications on file for five or more years. In Garrett County, the transportation supervisor selects potential contractors from the group of substitute drivers. In addition, if a retiring contractor can sell his bus to an acceptable party, the transportation supervisor will review the potential buyer's qualifications. If they are acceptable, the transaction is approved.

The variety in procedures for awarding contracts can be a pertinent issue. The major abuses of the contract system are most likely in awarding contracts and assigning routes. If an adequate number of qualified applicants can be found, the approach used in Wicomico County would most likely avoid manipulation.

Not all the localities studied used written contracts. For years Frederick County has relied on the handshake between gentlemen. Among those localities using written contracts, various forms are in use. In the interests of equity, we recommended the State require the use of written contracts. A State-recommended form for such contracts should be prescribed.

Not all of the localities studied implemented the State formula in the same manner. Frederick County modifies the service required of the contractor by making available publicly owned buses as spare buses. Garrett County, of course, pays a 5% premium in addition to that allowed by the formula.

The largest difference in regard to contractors among the studied localities was their policies toward the use of publicly owned buses. Anne Arundel County is a contract operation except for a limited number of publicly operated routes for the handicapped. Baltimore City contracts with the MTA to carry over 75% of its transported pupils. Public ownership is otherwise the policy; contractors are being phased out. In January 1971, Frederick County adopted the policy of maintaining a parity between the ratio of contracts and public routes. Garrett County relies entirely on private operators except for the transport of the handicapped. Montgomery County is an entirely public operation; Wicomico County is entirely private.

The diversity among localities applies to their policies in regard to field trips. Anne Arundel County does not use its publicly owned buses for field trips. Contractors are paid on the following basis: for the use of the bus $5 per day within the County, $10 outside of the County, and $15 outside of the State; for travel $.15 per mile; for drivers' wages $2.83 per hour plus 11% for "fixed charges." Baltimore City uses publicly owned buses for field trips and prorates the actual cost as has been described in an earlier chapter. Frederick County uses County-owned buses on field trips and charges $2 per hour for the driver and $.20 per mile for operation. Garrett uses locally financed, publicly owned buses for field trips. The County charges $3 per hour plus the actual cost of the gasoline used. Montgomery County charges $3.75 per hour for the use of its publicly owned buses on field trips. Wicomico County relies on its contractors for field trips and pays a flat $.35 per mile.

Each locality has its own approach to accounting and control. The systems usually rely on the County's centralized accounting -- a conventional application of line-item control and fund accounting. The simplest system was found in Wicomico County, where a deck of 4" x 7" cards sufficed as an accounting and control system. Public ownership naturally complicates the issue and brings about a need for greater control. In some cases this need was not met. In Baltimore City, operating costs by vehicle were made available too late to achieve any operational benefits. State Department of Education really needs to facilitate the improvement of managerial controls.

With the exception of Baltimore City, the studied localities generally conformed to the requirement that transported children live no closer than one mile to the closest applicable school. The open enrollment policy and elementary space shortages in Baltimore City have resulted in transporting pupils who would not have been transported otherwise. Montgomery County departs from State policy on the useful life of buses by retiring its school buses in groups after nine rather than ten years of use.

D. RECOMMENDATIONS

Uniformity is not a virtue in itself, especially when conditions differ. However, if the State is to fund 100% of the pupil transportation cost, it should influence the level and nature of the service. This is not the case in Maryland. We believe that the interest of economy is not served by the present situation. If the State continues to fund 100% of the transportation cost, the primary thrust at obtaining economy should be based on periodic managerial audits of local programs. The way has been established by the recent Baltimore City study, a draft of which was released to ADL. The study appears to be competently done, considering its scope, and we recommend that it receive serious consideration. The Baltimore study is, however, an episode rather than a phase of a continuing audit. The proposed management audit should have more depth and be scheduled at regular intervals of 3-5 years. Audits should be repeated more frequently if requested and funded by a locality.

An adequate managerial audit of a locality's program should be performed by a team composed of State specialists and staff drawn from other localities. The latter will benefit from the exposure to other localities' practices. The management audit should be coordinated with a fiscal audit and use computer assistance to review scheduling and routing. The localities' routes should be projected for current and future pupil populations. This way, present and future equipment requirements can be established. When these data are coupled with other projections, the audit teams will be able to project the costs of an acceptable minimum program. This projection would be based on a careful analysis of the detailed factors which affect transportation in each locality.

It appears more logical to base the State reimbursement on a minimum acceptable program developed in this fashion than to rely on a formula or another mechanical approach. The localities should then finance the costs of any deviation from the recommended minimum program.

VI. STATE POLICY

Two key issues of State policy require comment:

- determination of an appropriate approach to the reimbursement of local transportation costs; and
- reorganization of the Transportation Section of the State Department of Education.

A. REIMBURSEMENT OF LOCAL TRANSPORTATION COSTS

The State has at least four options as to the reimbursement of transportation costs:

- continued use of the present State formula;
- elimination of the State reimbursement;
- the use of a linear density index; or
- the use of detailed studies of each locality's needs.

1. Reimbursement With The State Formula

The present State formula (Appendix I) has been widely critized. To determine a fair reimbursement objectively, the formula may be theoretically faulted. It is a premise of economics that costs do not determine prices; markets do. The calculations used are also questionable. The formula is used over a standard vehicle life of ten years; amortization is computed for eight years. The allowance of amortization for the additional two years presumably increases the State reimbursement for vehicle costs to 125% of allowed costs. The allowance for interest is calculated on the basis of original undepreciated cost. If it were calculated on the average depreciated book value of the vehicle, this allowance would be reduced by more than one-half. However, the formula disregards other necessary investments in garage equipment, parts, and storage facilities. Based on ADL's analysis of the cost of public costs of operation, the formula's 1969-70 allowances for "fixed costs", and other expenses appear reasonable. The present relationship of the allowances to actual costs of the private operators is not known, because of the unsatisfactory response to the contractor questionnaire (Chapter I). However, given the recent inflation, the contractor no doubt now finds himself at a disadvantage compared to 1969-70. Nevertheless, the primary value of the State formula is that it exists and has received a level of acceptance.

Recently, the knowledge of the formula has encouraged contractors and their representatives in Maryland School Bus Contractors Association to look beyond the local transportation supervisor to the State Department of Education. There have been no direct negotiations on the formula between the Association and the State Department of Education, but the Association goes to lengths to express its opinions and have its influence felt. The continued use of the formula can, obviously, lead to a form of statewide negotiation.

A serious question has existed within the State as to whether the formula is equally applied without regard to the ownership of pupil transportation. Based on this study of six localities, it appears that the formula is applied more or less equally. Counties using public buses have their reimbursement requests reviewed with essentially the same criteria as used in other cases. The wages allowed for the drivers of public equipment do not exceed those set in the formula. Only in the area of fringe benefits (fixed costs) may a County exceed the 11% appearing in the formula. For example, fringe benefits in Montgomery County total 13.13%. There are few cases similar to Montgomery County in this regard; the allowance of full fringe costs always increases the reimbursement by only a nominal amount, i.e., 2.13% of wages. The public operator's average per mile operating costs usually fall below the limits set by the formula. Transit-type buses pose an exception. The procurement costs of buses by public operators is usually below the formula limits. Again, transit buses are exceptions. All other costs in the reimbursement requests by localities with public operations are approved with the same criteria as used to approve other requests.

The Maryland School Bus Contractors Association has alledged that the State prefers public operators by allowing them 1% of their State aid as assistance for capital facilities. Nevertheless, the 1% capital outlay allowance is essential for effective public operation. ADL's inspection of publicly owned garages, shops, and other facilities found public operators dramatically short of almost all necessary capital equipment and facilities other than vehicles. The State should determine the allowance for capital outlay, by examining the need in each case. If this is not done, the allowance should at least equal the annual depreciation of such equipment.

In 1964, Dr. Paul A. Henry concluded that road conditions were fairly uniform throughout the State. He recommended the elimination of road condition as a factor in the State formula.[15] Examination

---

[15] Paul A. Henry, "A Study of Factors Related to State Reimbursement of Pupil Transportation Costs in the Twenty-four Local School Systems of Maryland" (unpublished Doctor's dissertation, American University, Washington, 1964) page 55.

of a January 1970 road inventory prepared by the Maryland State Roads Commission showed that the conditions observed by Henry still exist. Therefore, we recommend that the State eliminate road conditions as a factor in the State formula.

If the State is to continue to use the formula,

- the treatment of investment, depreciation, and interest should be changed;
- the other allowances should be changed only as inflation necessitates;
- the assistance for capital outlays should be based on actual need; and
- the factor of road conditions should be deleted.

The continued use of the formula may result in tacit negotiations between the Maryland School Bus Contractors Association and the State. The formulas greatest virtue is its current acceptance as the status quo.

2. Elimination of State Reimbursement

Elimination of the State reimbursement of transportation costs is a very practical option. Apparently, the primary difficulties of State-level administration have resulted from dealing with the reimbursement issue. These activities have drawn off the resources which would have been used for confronting such issues as safety. The termination of the reimbursement does not necessarily mean a reduction of the total State aid going to the political subdivisions of the State. The same level of total aid could be distributed through some other channels.

The reimbursement of transportation originated in the early attempts to upgrade educational standards by consolidating ineffective, small rural schools. This educational battle was largely won by the end of the 1920's. The policy of reimbursing for transportation appears to have remained as the result of political inertia.

With the elimination of State reimbursement, the State Department of Education could continue to act as the State's coordinating and governing body. Whether it would still retain any of the present authority stemming from the reimbursement should, however, be determined.

3. Linear Density Index

In 1964, Dr. Henry[16] suggested a mathematical approach for establishing an index to reimburse transportation expenditures. This approach is described in the extract from the Dixon Committee's report (Appendix XV). The approach appears eminently workable, and we understand it has been somewhat successful in Kentucky.

The greatest attraction of Dr. Henry's approach is that it uses actual cost data to determine a normalized index for reimbursement. In considering density, which appears to have a major influence on costs, the approach fairly treats both rural and urban communities.

The approach lends itself to a policy of less than full State reimbursement of transportation costs. The actual costs of the State's political subdivisions may be used in the recommended fashion to calculate the index. The State may then reimburse on the basis of a percentage of this index.

4. Reimbursement Based on a Detailed Study

The need for managerial audits and their use in determining reimbursement is treated in Chapter V. It is sufficient to note that this approach cannot be immediately used except to determine the need for capital outlays because the State has not had enough experience in conducting such audits. Thus, the use of managerial audits to determine the level of aid going to a locality must be relegated temporarily to the future.

5. Recommendations Regarding Reimbursement

The principal criticism in this study of the State's present approach is that the State fails to encourage efficiency at local levels, because the localities do not participate materially in the costs of transportation. To a lesser extent, the present formula has been faulted on the account of the issues listed. Consistently, our primary recommendations are that:

- the State should require material local participation in transportation costs;
- the State's policy for reimbursement for transportation should be consistent with its overall policy for public education, i.e., the full cost of capital outlays and not more than 2/3 of the cost of operation should be reimbursed;
- this policy should be implemented by using Dr. Henry's linear density index; and

---

[16] Henry, op cit.

- the portion of operating costs reimbursed by the State should be gradually reduced from the present 100% level so as to effect a transition from the present policy.

B. REORGANIZATION

Reorganization of the Transportation Division of the State Department of Education per se, is not contemplated in this study. However, the field work indicates that coordination needs to be enhanced between the two State agencies responsible for transportation, i.e., the State Department of Education and the Department of Motor Vehicles. Also, many school bus contractors are interested. If a formal channel existed for the contractors to express themselves, this study might have been avoided. It is, therefore, recommended that a permanent committee be established to advise the State Superintendent of Schools and the Commissioner of the Department of Motor Vehicles. The membership of this committee should include one person from the Department of Motor Vehicles, two persons from the State Department of Education, two persons from the administrative staffs of the local school districts, and two school bus contractors. The committee's members should be appointed by the Governor on the advice of the Superintendent and the Commissioner.

APPENDIX I

Texts of the

"POLICIES WHICH GOVERN APPROVAL OF TRANSPORTATION COSTS FOR INCLUSION IN MINIMUM PROGRAM"

and the

"TRANSPORTATION FORMULA FOR MARYLAND"

as Approved for the 1971-72 School Year

Maryland State Department of Education
Baltimore, Maryland 21201

POLICIES WHICH GOVERN APPROVAL OF TRANSPORTATION COSTS FOR INCLUSION IN MINIMUM PROGRAM

1-100 Programs which are included are:

1-101 Transportation of pupils from home to the school which they attend and return from school to home.

a. Pupils who live one mile or more from school are eligible for transportation.

b. Where exceptional conditions exist, consideration may be given for transportation. Such conditions must be reviewed annually for approval.

c. Exceptions for kindergarten students at noon time may be made upon approval of the State Department of Education.

1-102 Transportation of pupils from one school to another for instructional program.

1-103 Transportation of pupils to the closest school where facilities are available.

1-104 Pupils transported to outdoor educational school sites for an outdoor educational program of two days or more. Trips to outdoor school sites that terminate in the same day shall be considered field trips (see Section 2-102).

2-100 Programs which are excluded are:

2-101 Transportation of pupils to nonpublic schools, except as provided in Section 99, Article 77 of the Annotated Code of Maryland. (The cost to be excluded for each nonpublic school pupil riding on a public school bus is equal to the total allowed administration and operation cost of all buses plus the cost of new equipment divided by the total number of pupils transported for each local unit.)

2-102 Field trips.

2-103 Transportation of pupils from one school to another for special programs (e.g., music festivals, Christmas programs, etc.)

2-104 Summer school programs and day camps.

3-100 Policies governing approval for inclusion in State program of pupil transportation costs for contract routes:

3-101 All additional or replacement school buses used to transport pupils to and from school must be new equipment. This means that secondhand school buses that were not purchased, acceptance checked, and originally used to transport public school pupils are not acceptable. Approved cost of bus is used for purpose of calculating interest and depreciation. (See Section 7-100 Transportation formula.)

3-102 Bus contracts equal to or less than formula are reviewed and approved.

3-103 Bus contracts more than formula are reviewed by the Coordinator of Safety Education and Transportation for recommendation to the State Superintendent of Schools.

3-104 Contracts for private cars and station wagons over $1000 are reviewed by the Coordinator of Safety Education and Transportation for recommendation to the State Superintendent of Schools.

3-105 Amounts for annual contracts under $1000 are honored without formal approval.

3-106 Where contracts are changed during the school year, actual amounts approved for the school year are to be calculated by methods used by the counties in paying the contractor to the closest 1st or 15th of the month in which the changes occurred. All contract changes must be submitted to this office by May 31 to be considered.

3-107 Allowance for fixed cost is to cover cost of school bus tags.

3-108 Maximum salary allowed for regular drivers for a 3-hour day is shown on the contract formula. Additional allowances are made as follows:

a. If driving time is more than 3 hours, 1/3 of the daily salary is allowed per hour. Adjustments will be made at 15-minute intervals.

b. At least 1-1/2 hours are allowed for a noon time run even if the noon driving time is less than 1-1/2 hours.

e. Maximum salary allowed is based on an 8 hour day.

d. Salaries of drivers who have not partieipated for at least 2 hours in a driver improvement program will be reimbursed at a rate of 50 eents per 3 hour day less than a qualified driver.

3-109 The 11% of allowed driver's salary is to eover workmen's compensation, unemployment insurance, and social seeurity. It is the responsibility of the loeal school system to inform school bus eontractors that they must comply with workmen's compensation, social security and unemployment insuranee laws.

4-100 Policies governing actual expenditures for publiely-owned buses included in State program for pupil transportation costs:

4-101 Amounts included for school year are aetual expenditures from May 1 of the previous year through April 30 of the current year.

4-102 Maximum salary allowed for regular drivers is the same as that used in the formula for contract buses as stated in Seetion 7-104.

4-103 Maintenance eosts in exeess of normal expectations are reviewed by the Coordinator of Safety Edueation and Transportation for reeommendation to the State Superintendent of Sehools.

4-104 Cost of vehieles is paid in the year purchase is made provided the bus has been assigned to a route.

4-105 Loeal sehool systems are eligible for 1 percent of the total State-allowed pupil transportation reimbursement to be used for expansion of pupil transportation eapital outlay faeilities. Capital outlay eosts in a eurrent year that exceed the 1 percent allowanee may be earried forward and reported in sueeeeding years until the total pupil transportation of the eosts are reimbursed.

4-106 Local school systems are eligible for reimbursement for workmen's eompensation, social security, and employees retirement not already paid by the State.

5-100 Policies governing approval of transportation of handicapped children:

5-101 Eligibility for transportation of handicapped children may be determined on the following basis:

a. Properly enrolled in any public school.

b. Enrolled in any nonpublic educational facility in accordance with Section 99 of Article 77 of the Annotated Code of Maryland.

c. Enrolled in the Maryland School for the Deaf and the Maryland School for the Blind.

5-102 Daily transportation within a fifty (50) mile radius of the private school may be provided. Reimbursement for parents when local school systems cannot provide other transportation shall have a maximum of $5.00 per day for handicapped students living within a 50 mile radius of the school they are attending during the regular school year. The regular school year for handicapped children shall be approximately the same as the public school calendar of the local system in which the pupil resides. Exceptions to this will require approval of the State Superintendent of Schools.

5-103 Children living beyond the limit established in B shall be eligible for two round trips each school year. The reimbursement determinant shall be the actual cost or commercial bus transportation cost of the most direct route within a 50 - 250 mile radius, whichever is the lesser, and the actual cost or tourist class air flight if over a 250 mile radius, (whichever is the lesser). The local school systems must certify that the amount requested is the lesser.

5-104 Children attending the Maryland School for the Blind and the Maryland School for the Deaf shall have transportation available to and from their home area on weekends. Local school systems providing the transportation shall establish discharge and pick-up points along designated highways within a reasonable distance of the passenger's home.

5-105 Transportation shall be arranged by the local school system through the transportation office in close coordination with the special education office.

5-106 A bus aide may be employed to serve on each bus transporting handicapped pupils at a maximum rate of $7.00 per day for a three-hour day, and $7.50 per day when the aide completes a training program. Additional allowances are made on the same basis as for regular drivers as stated in Section 3-108 and Section 3-109.

6-100 Policies governing approval for administration of pupil transportation to be included in State reimbursement:

6-101 One supervisor is allowed per local unit.

6-102 Assistant supervisors of transportation and clerks may be allowed as follows:

Number of Pupils Transported	Number of Assistant Supervisors	Number of Clerks
7,000	0	1/2
7,001 - 14,000	1	1
14,001 - 21,000	2	1-1/2
for each 10,000 pupils over 21,000	1 additional	1/2 additional

These assistant supervisors must be paid at least the State teacher salary plus 20 percent.
Clerks are paid at a maximum of $4400.

6-103 Travel cost within the State for each supervisor and assistant supervisor is allowed up to $500 per year.

6-104 Reimbursement for safety meetings, workshops, and other costs for training driver personnel up to $10 for each conveyance use to transport pupils to and from school is allowed.

6-105 An additional $2 per hour is allowed for driver participation in training programs up to $50 per bus.

6-106 Approved inspection costs are allowed.

6-107 Reimbursement for annual physical examination for regular and substitute drivers up to $10.00 per driver is allowed (reported in December and June on Voucher A&F 7, Revised January 1970)

6-108 Minimum insurance coverage for school bus operation effective July 1, 1971.

Bodily Injury Liability (each person)	$ 500,000
Bodily Injury Liability (each accident)	1,000,000
Property Damage	50,000
Medical Payment (each person)	2,000

It has been interpreted that a coverage with a $1,000,000 limit per accident does meet this minimum insurance requirement.

7-100 Transportation Formula for Maryland July 1971

7-101 Depreciation .125

7-102 Interest .070 .195 x allowance

7-103 Allowance for Fixed Costs - School bus tags $20.00

7-104 Salary of Drivers - buses and panels: $10.00/day
$10.50/day when driver completes training program

11% of allowed driver's salary will be allowed to cover employer's share of workmen's compensation, unemployment insurance and social security.

7-105 Gasoline, Oil, Grease and Antifreeze (adjusted annual mileage[1] x capacity factor)

Capacity	Factor	Capacity	Factor
12	.0483	48	.0696
24	.0550	54	.0745
30	.0585	60	.0801
36	.0617	66	.0867

7-106 Tires (adjusted annual mileage[1] x tire factor)

8:00 x 14 - .0116	6:00 x 20 - .0192	7:00 x 22.5 - .0181
7:10 x 15 - .0116	6:50 x 20 - .0221	8:00 x 22.5 - .0305
6:00 x 16 - .0116	7:00 x 20 - .0245	9:00 x 22.5 - .0340
6:50 x 16 - .0140	7:50 x 20 - .0297	10:00 x 22.5 - .0408
7:00 x 16 - .0153	8:25 x 20 - .0330	
7:00 x 17 - .0173	9:00 x 20 - .0397	

7-107 Maintenance (adjusted annual mileage[1] x maintenance factor)

Buses:	.0583
Panel Bodies	.0291

7-108 Road Conditions

Dirt	2.0
Gravel	1.7
Paved	1.0

[1] Adjusted Annual Mileage (actual daily miles x number of school days in year x factor for road condition x grade factor)

7-109 Maximum Allowance for New Equipment

Capacity	Allowance
66 -- 11 rows of seats	$8,500
60 -- 10 rows of seats	8,000
54 -- 9 rows of seats	7,300
48 -- 8 rows of seats	6,600
36 -- 6 rows of seats	[2]
30 -- 5 rows of seats	[2]

[2] Allowance for smaller vehicles to be approved by State Superintendent of Schools

APPENDIX II

Text of

CHAPTER V, CONCLUSIONS AND RECOMMENDATIONS

OF DIXON COMMITTEE'S REPORT,

STATE REIMBURSEMENT FOR PUBLIC SCHOOL TRANSPORTATION IN MARYLAND

as published by the

Maryland State Department of Education

in

September, 1964

Chapter V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The present method of reimbursement for transportation costs in Maryland is adequate to provide the services required and needs only to be adjusted to include or delete items and remove potential inequities. The Maryland system compares favorably with all other state systems.

2. Density of population is directly related to per pupil transportation cost. Type of ownership (contract vs. public) has the greatest influence on the variance of transportation costs in Maryland.

3. Road conditions or type and grade factors have a small influence on the over-all cost of transportation. This is decreasing rapidly with the improvement of roads.

4. The present method of reimbursement seems to favor financially contract service.

5. There is a wide variance in the reported acquisition cost and reimbursement for capital outlay of buses. This is further amplified by reimbursement of 125 per cent of approved cost plus 50 per cent interest over a ten-year period for contract service. Reimbursement for publicly-owned buses is 100 per cent over five years.

6. There is no State standard for an approved distance which a pupil would be expected to walk either to school or to reach the bus stop location.

7. Since Baltimore City transports less than 1 per cent of the regular school population, it is different from the rest of the State.

8. The per pupil cost of transporting handicapped children is much higher than similar costs for regular students.

9. The present method of approval of transportation costs does not provide for office expenses or for certain personnel.

10. The present method of approval for reimbursement of the cost of driver training is not clearly stated. Therefore, there is some question as to the adequacy of such reimbursement.

11. There are several areas where some provision should be made for study.

Recommendations

After careful consideration and study, the committee compiled the following recommendations:

1. That the content of this report be given immediate consideration.

2. Contract reimbursement to continue with the present formula with an increase in the mileage factor sufficient to compensate for the additional tax of 1 cent per gallon, and an increase in the allowed purchase price of smaller vehicles. The new limits to be as follows:

   a. Maximum allowable capital outlay

66 p	$8,000
60 p	7,500
48 p	6,100
30 p	5,100
12 panel	3,500

b. Driver's Salary

$7.50/day
$8.00/day if driver has successfully completed a training program as specified by the Maryland State Department of Education

Per Miie Allowance

Passenger	Gasoline, etc.	Tires	Maintenance	Total
66	.0724	.0341	.0450	.1515
60	.0669	.0341	.0450	.1460
54	.0622	.0284	.0450	.1356
48	.0582	.0255	.0450	.1287
36	.0517	.0255	.0450	.1222
30	.0489	.0211	.0450	.1150
24	.0460	.0190	.0450	.1100
12	.0404	.010	.0200	.0704

Allowance for fixed costs per bus - $75.

Consideration be given to removing gradually road factors over the next ten years.

Thoroughly study the mountain counties to develop an equitable reimbursement rate for grade.

3. Reimbursement for public ownership operation should be altered as follows:

a. Full amortization of approved capital outlay costs during the year purchase is made.

b. The actual cost of operation to be reimbursed up to 90 per cent of State formula for contract service, or actual cost, whichever is the lesser. Additional employees, drivers' salaries, maintenance shop amortization, bus repair,

additional insurance, etc., to be included in cost up to this maximum. All such inclusion should be subject to the approval of the State Superintendent of Schools.

4. State reimbursement for supervisory and clerical employees should be included as follows for all types of transportation service:
   a. One supervisor per unit with the same minimum pay scale as other educational supervisory personnel.
   b. One assistant would be provided on the State teachers' salary scale plus 20 per cent when 7,000 or more pupils are transported and one for each additional 7,000, or portion thereof.
   c. One-half clerical employee be included for each 7,000 pupils transported, or portion thereof.
5. Reimbursement for transportation costs be provided for those pupils who live one mile or more from school.
6. The reporting and accounting for handicapped children's transportation should be kept separately and a further study of this cost should be made.
7. Each administrative unit should determine the type of system it wishes to operate.
8. The State Department of Education should develop a set of guidelines to be used in determining those items which should be included for reimbursement and the method of determing eligibility for reimbursement.

9. When requested, the State should organize evaluation survey committees to assist local units in providing the best possible transportation service.
10. Further consideration should be given to the eventual use of an index based on pupils transported per mile.

Recommended Topics for Further Study

1. Reporting and accounting procedures related to pupil transportation reimbursement.
2. Greater utilization of electronic data-processing equipment.
3. Utilization of transportation time for educational purposes.
4. Possible reimbursement of transportation costs for educational field trips.
5. The operation and cost of transportation services for handicapped children.
6. A study should be conducted by the State Department of Education to determine the feasibility of writing specifications and inviting sellers to submit bids for school buses and to determine the net effect of such a procedure.

APPENDIX III

Texts of

"RESOLUTION NO. 1968-15 OF THE MARYLAND STATE BOARD OF EDUCATION"

and of

"RECOMMENDATIONS FOR THE IMPLEMENTATION OF THE STATE BOARD OF EDUCATION RESOLUTION 1968-15"

Resolution

Maryland State Board of Education

March 27, 1968

Resolution No. 1968-15 Re: Publicly Owned School Buses

WHEREAS, There is a need to make transportation service an integral part of the total school program; and

WHEREAS, The State of Maryland is committed to providing efficient school transportation at as low a cost as possible; and

WHEREAS, Studies indicate that a considerable savings to the taxpayers of the State will result in the operation of publicly owned school buses by the local school units; and

WHEREAS, It is recognized that at the moment there are many contractors in the State who have considerable investment in school transportation operations; and

WHEREAS, A number of the local school systems are gradually increasing the number of publicly owned school buses without causing financial loss to present private school bus operators; now, therefore, be it

RESOLVED, That the State Board of Education urges the State Superintendent of Schools to promulgate guidelines for establishing a transition policy from private to publicly owned school buses throughout the State without causing undue financial hardship to those contractors who are now serving the various school systems.

RECOMMENDATIONS FOR THE IMPLEMENTATION OF THE STATE BOARD OF EDUCATION RESOLUTION 1968-15

There are valid reasons for local school systems purchasing and operating their own school bus fleet. Two important reasons are:

1. To effectively control the transportation service as an integral part of the total school program.

2. To keep the cost of transportation services as low as possible without compromising safety or efficiency.

Local school systems which now have privately owned school buses should give consideration to a policy leading to the purchase, maintenance, and operation of a publicly owned school bus fleet. Such a policy should make gradual the transition from private ownership to public ownership. It should in no way disregard existing contracts and should give careful consideration to the welfare of those individuals who have faithfully served as school bus contractors. In formulating this policy, the following guidelines should be considered.

1. Each year, as additional school buses are required, consideration should be given to purchasing and operating them by the Board of Education.

2. When the holder of a contract, whether an individual owner-operator or a corporation, relinquishes the contract, the Board of Education should consider replacing it with its own vehicle(s). The Board of Education shall be under no obligation to purchase the privately owned vehicle(s).

3. If the holder of a contract dies during the term of the contract, the Board of Education may consider:

   (a) Awarding the contract to a qualified surviving spouse. Qualifications should be identical with those which the original contract holder met.

   (b) Possible replacement of the privately owned school bus with one owned by the Board of Education.

   (c) Temporary leasing of the privately owned school bus for the remainder of the school term.

4. Local boards of education have the option to purchase a private school bus, based on terms agreeable to both the purchaser and the seller.

5. The State Board of Education formula for reimbursement to the local board of education must be consistent. It shall reimburse the local school systems for the purchase of a privately owned school bus on the basis of the amortization rate under which the bus was originally acquired.

6. The implementation of these guidelines shall begin no later than July 1, 1969.

These guidelines shall in no way supersede administrative procedures and decisions respecting powers that are inherent in local boards of education. There shall be no differentiation between holders of school bus contracts; both individual owners and corporations may be considered on equal terms.

APPENDIX IV

Text of the

Minority and Majority Reports

submitted by the

Avara Commission

REPORT TO THE GOVERNOR'S COMMISSION TO STUDY SCHOOL PUPIL TRANSPORTATION

R. Charles Avara, Chairman
Charles O. Bender
Theodore L. Bertier, Jr.
James Clark
George Cochran Doub, Jr.
Quenton Earhart
Edward Goldman
John R. Hargreaves
Paul Henry
Carter M. Hickman
David S. Jenkins
Herbert Keene
John W. Logan
Vincent Migliorini
Charles H. Smelser

Curtis J. Karpel, Reporter

Legislative Council of Maryland
16 Francis Street
P.O. Box 348
Annapolis, Maryland 21404

The Governor's Commission to Study School Pupil Transportation convened on September 4, 1969, pursuant to Senate Join Resolution 57. The purpose of this Commission was to study the problems relating to school pupil transportation and whether said transportation could best be provided by public ownership of buses or by private contractors. The make-up of the Commission was such as to include representatives of the State Department of Education and the Maryland School Bus Contractors Association.

The Commission held five meetings. At these meetings reports were presented by both the State Department of Education and the School Bus Contractors Association.

"Public ownership," at the Commission's first meeting, was defined as ownership by the local Board of Education and, or, school system.

The State Board of Education Resolution of March 27, 1968, Resolution No. 1968-15, was read to the members of the Commission. This resolution stated that public monies could be saved through a system of public ownership of school buses. The Commission charged the State Department of Education with providing the facts that would support this contention since the Department of Education was suggesting the change to public ownership. In explaining the savings that would be achieved under a public ownership system, a representative of the State Department of Education said that major savings would be evident in the urban and suburban areas of the State, but that the savings would be less marked in those areas with lesser concentrations of people.

The Commission was informed that certain urban and suburban counties had instituted public ownership while the smaller and generally rural counties, to a great extent, used private contractor buses.

At one meeting the Commission heard testimony from Mr. Pope Baird, a representative of the Florida Department of Education, who discussed the formula for reimbursement used in his state. The Commission was informed by Mr. Baird that there was no such thing as a perfect or ideal reimbursement formula. Indeed, Mr. Baird testified that changes were often necessary using the same formula on a year-to-year basis.

The Commission learned that in Montgomery County, where there is complete public ownership of the school buses, it was necessary for the County to build a parking lot and garage in order to house its publically owned buses. The Commission was told that the cost of the construction of this parking lot and garage was paid by the local County Council and that no State funds were used to build these facilities.

The Commission was informed that in Carroll County, three new buses were bought by the local County Board of Education within the past year and that now the County Commissioners are faced with a request for local County monies in order to construct a garage that would house the publically owned buses.

Both the State Department of Education and the School Bus Contractors Association presented reports dealing with the question of school bus safety and how accidents could be reduced. The State Department of Education contended that school bus safety could be increased through a public ownership system because greater supervision and control would be exercised over the individual bus driver. The School Bus Contractors Association presented figures that indicated more accidents occurred under public ownership than under the private contractor system of school bus operation.

Both the representatives from the State Department of Education and the School Bus Contractors Association agreed that the present State reimbursement formula was less than ideal. Both the State Department of Education and the School Bus Contractors Association urged the adoption of a single reimbursement formula that would apply regardless of the type of bus ownership.

The School Bus Contractors Association also urged the Commission to consider the interests of those eleven hundred small businessmen throughout the State who are the independent school bus contractors.

It soon became evident that a complete and in-depth study of this complex problem could not be achieved by this Commission due to the shortage of time and the many unknown criteria that had to be considered. Indeed, after the respective reports had been presented to the Commission, most members felt they still did not possess all the relevant facts in order to deal with this problem of public versus private ownership of school buses. Thus, almost everyone agreed that they were not in a position to make a definitive statement at this time indicating that one type of ownership was superior to the other.

RECOMMENDATIONS

The Commission, however, respectfully makes the following recommendations to the Governor and the Legislative Council:

1. Realizing that this Commission is not in a position because of the complexity of the problem to recommend whether said transportation can best be provided by public ownership of school buses or by private contractors for the following reasons:

   (a) Because of the problems in comparing the cost of private ownership in one area of the State with a public ownership system in another and wholly different location within the State.

   (b) Because of the problem in forecasting the actual cost of a public ownership system if public garages and parking lots will have to be constructed in order to house and maintain a fleet of school buses owned by the various counties or Baltimore City.

   (c) Because of the problem in dealing with such items as the density factor, a subject of prime importance in determining the State reimbursement formula.

   However, this Commission believes that the submission of full information and data relating to the cost of school transportation must be made available to the local governing bodies of the various counties and Baltimore City. Once said data has been submitted, the approval of the local governing bodies of the various counties and Baltimore City shall then be necessary in order to initiate or expand the public ownership of school buses. The Commission urges that legislation to that effect be introduced in the 1970 session of the General Assembly.

2. This Commission, recognizing the need for objectivity in this complicated field of school pupil transportation, recommends that funds, if needed, be provided for an independent and impartial consulting firm or some other group to study in depth the problem of school pupil transportation reimbursement with the view of developing a new State pupil transportation formula to reimburse local school systems for both capital outlay and operating costs, and to apply equally regardless of the bus ownership.

Respectfully submitted,

R. CHARLES AVARA
Chairman

MINORITY REPORT OF THE GOVERNOR'S COMMISSION TO STUDY SCHOOL PUPIL TRANSPORTATION

R. CHARLES AVARA, Chairman
CHARLES O. BENDER
THEODORE L. BERTIER, JR.
JAMES CLARK
GEORGE COCHRAN DOUB, JR.
QUENTON EARHART
EDWARD GOLDMAN
JOHN R. HARGREAVES
PAUL HENRY
CARTER M. HICKMAN
DAVID S. JENKINS
HERBERT KEENE
JOHN W. LOGAN
VINCENT MIGLIORINI
CHARLES H. SMELSER

Curtis J. Karpel, Reporter

Legislative Council of Maryland
16 Francis Street
P. O. Box 348
Annapolis, Maryland 21404

MINORITY REPORT OF THE GOVERNOR'S COMMISSION TO STUDY SCHOOL PUPIL TRANSPORTATION

Although my conclusions regarding the information considered by the Governor's Commission to study school pupil transportation are identical to those of the Commission, I am unable to concur entirely in the recommendations which the Commission has made based upon such conclusions.

By its Resolution of March 27, 1968, No. 1968-15, the State Board of Education expressed the view that public ownership was preferable to private ownership. Apparently, as a result of that Resolution of the State Board of Education, Senate Joint Resolution No. 57, introduced by Senators Bertier, Smelser and Clark, was adopted by the General Assembly requesting that the Governor appoint a Commission "to study the problems relating to school public transportation" and to include in the Commission's report "recommendations concerning the necessary costs of such transportation, and whether said transportation can best be provided by public ownership of buses or by private contractors."

After reviewing a great quantity of information the Commission concluded that it was unable to determine whether private ownership or public ownership of school buses is preferable. The information presented to the Commission related

virtually exclusively to a comparison of relative merits of the two systems, particularly with regard to safety, supervision of students and cost.

Although the safety factor lends itself to emotional appeals, it was not established with any degree of certainty that either private or public ownership constituted a safer form of transportation. Data was introduced indicating that fewer accidents occurred in localities in which school buses were privately owned, and the response was made that in such localities not all accidents are reported. No information was produced to establish the accuracy of this response and no logical reason was given for the suggestion that either system is any safer than the other. The assertion that the local school systems are unable to exert adequate supervision and control of pupils while being transported to and from school on privately owned buses was unsubstantiated. The question to which the Commission directed its primary attention was the difference in cost of the public and private ownership systems. Several deficiencies in the present system of defraying costs of the private ownership through a reimbursement formula became apparent. Both due to the obvious deficiencies of the existing reimbursement formula and due to the absence of date regarding private and public ownership of sufficiently similar form to permit comparison, no conclusion could be reached by the Commission regarding the relative cost to the taxpayer of public and private ownership.

I concur in the conclusion of the Commission that an in-depth study of the revision of the school pupil transportation reimbursement formula should be conducted; however, I suggest that the study also include the complex question, which this Commission was appointed to resolve, regarding the relative merits of the public and private transportation systems. I do not concur in the recommendation of legislation requiring the approval of the local county governing bodies and Baltimore City in order to initiate or expand public ownership of school buses. The Commission devoted virtually all its attention to determining which of the two systems was preferable, and no information was presented regarding the need for this proposed legislation nor regarding the probable effect of such legislation. The members of the Commission are therefore no better qualified than other individuals to evaluate the proposed legislation. Yet by recommending it, the Commission gives the proposed legislation the appearance of being the product of expertise. The proposed legislation appears to favor private ownership since it permits local school boards to expand their private transportation system without prior approval of local governing agencies. The proposed legislation is not limited in time to a definite period within which a determination is to be made, based upon thorough investigation, of the relative merits of the public or private ownership systems.

Edward Goldman authorizes me to state that he concurs, in principle, in this minority position.

Respectfully submitted,

George Cochran Doub, Jr.

APPENDIX V

CONTRACTOR QUESTIONNAIRE

Arthur D. Little, Inc. ACORN PARK • CAMBRIDGE MASSACHUSETTS 02140 • (617) 864-5770

June 8, 1971

Dear School Bus Contractor:

As you probably are aware from the newsletter of the Maryland School Bus Contractor's Association, our firm has been retained by the Governor's Committee to Study Public versus Private Ownership and Operation of Public School Transportation in the State of Maryland. Mr. Fred H. Spigler, Jr., Governor Mandel's Administrative Officer for Education, chairs this committee, which includes as members: Mr. Ellis J. Dudney, the present President, and Mr. T. H. Schaefer, the past President of the Maryland School Bus Contractor's Association.

As part of our work, we are asking each contractor in six political subdivisions of the state to respond to the enclosed questionnaire. The information requested from you in the enclosed questionnaire will assist us in recommending needed revisions to the state's formula of reimbursement for pupil transportation and will also permit us to accurately state the cost of contract services vis-à-vis public ownership.

Both Mr. Dudney and Mr. Schaefer have reviewed the enclosed questionnaire, and Dr. David S. Jenkins, the Executive Director of the Maryland School Bus Contractor's Association, has kindly assisted us by making available the Association's mailing list. Either Dr. Jenkins or I will be glad to answer any questions you may have in regard to the questionnaire.

Since only a portion of all the school bus contractors in Maryland will be asked to complete the questionnaire, your reply is important to the study. Therefore, although as a private businessman you are under no obligation to reply, we ask for your assistance and would appreciate your help in this matter. After you have completed the questionnaire, please use the enclosed postage-paid envelope and return the questionnaire to us.

Sincerely,

John W. Frank

John W. Frank
Project Director

JWF/ggg

MARYLAND SCHOOL BUS CONTRACTOR QUESTIONNAIRE

When completed please use the enclosed stamped envelope and return this questionnaire to:

Mr. John W. Frank
Arthur D. Little, Inc.
35 Acorn Park
Cambridge, Mass. 02140

1. How many buses do you own in the following categories:

   A. Buses regularly assigned to public school routes _____

   B. Buses regularly held as spares for public school routes _____

   C. All other buses used for charter and/or on non-public school routes _____

   D. Total of buses owned (sum of A, B, & C above) _____

2. Of the buses counted in "1-A" above, how many are used in the following manner:

   A. On public school routes only _____

   B. On public school routes and school-related charter work only _____

   C. On public school routes and general charter work _____

3. In respect to buses regularly assigned to public school routes, please estimate both total annual mileage and revenue in the 1969-70 school year from the following:

	Annual Mileage	Annual Revenue
A. Public school route	_____	$_____
B. Public school-related charter work	_____	_____
C. General charter work*	_____	_____
Totals	_____	$_____

*Please exclude general charter work performed with buses owned solely for such work.

4. Please provide the following information on each of your buses regularly assigned to public school routes. (If more than three buses are in this category, please supply such information on a separate sheet.)

	Bus "A"	Bus "B"	Bus "C"
Model year			
Capacity without standees			
Cash cost	$	$	$
Value of trade-in			
Purchase/title tax			
Other cost (explain) _____			
_____			
Total cost delivered	$	$	$

5. Have you included in "4" above costs for optional extras not called for by the specifications for school buses in your political subdivision?

Yes _____

No _____

6. If the answer to question 5 is yes, please list the major optional extras included in the costs under "4" above.

Type of Optional Extra	Estimated Cost of Optional Extra on Bus "A"	Bus "B"	Bus "C"
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

7. Excluding school buses, estimate the investment required during the 1969-70 school year for your contract(s) and school-related charter work:

   A. Inventories of spare parts, tires, fuel, etc. $_____

   B. Service vehicles, if any _____

   C. Tools and equipment _____

   D. Buildings and real estate _____

   E. Other (explain)_____ _____

   _____ _____

   Total $_____

8. What is the annual (simple) interest rate you paid in the 1969-1970 school year to carry your investment? _____%

9. On the average, what daily wage did you pay to obtain a driver during the 1969-1970 school year? $_____

10. Please provide the following cost data for the average bus regularly assigned to public school routes (and used on public school charter work) during the 1969-70 school year:

    A. Total annual mileage driven _____

	Per Mile Cost *	Annual Total Cost*
B. Fuel	$_____	$_____
C. Lubrication/oil	_____	_____
D. Tires	_____	_____
E. Maintenance/storage	_____	_____
F. Other (explain)_____	_____	_____
_____	_____	_____
Total	$_____	$_____

*Either per mile or total annual costs may be supplied

11. Please estimate the taxes incurred during the 1969-70 school year in operating buses regularly on public school routes, in keeping spare buses for public school routes, and in performing public school charter work.

	Total Annual Tax
A. Federal excise taxes	
1) Bus chassis and bodies (10% of net sales price)	$_____
2) Parts and accessories (8% of net sales price)	_____
3) Gasoline (4¢/gallon)	_____
4) Lubricating oil (6¢/gallon)	_____
5) Tires (new tires @ $8.50*each)	_____
(retread tire @ $1.50*)	_____
(tube @ $0.50*)	_____
6) Other federal excise taxes (explain)_____	_____
_____	_____
B. State excise and sales taxes	
1) Vehicle license (school bus plates @ $20/yr.)	_____
(charter bus plates @ $40/yr.)	_____
2) Title tax on vehicle (4% of net sales price)	_____
3) State gasoline tax (7¢/gallon)	_____
4) State sales tax on tires, batteries, parts, and other expenditures (4% of net sales price)	_____
5) Other state excise and sales taxes (explain)	_____
_____	_____
C. Local taxes	
1) Taxes assessed on the value of personal property (i.e., vehicles, equipment and inventory)	_____
2) Taxes assessed on real estate	_____
3) Other local taxes (explain)_____	_____

*Approximate federal excise tax for 66 passenger buses.

D. Employer's taxes

	Total Annual Tax
1) Employer's portion of social security taxes (4.8% on wages up to $7800/yr. or a maximum of $374.40 per employee)	$ _____
2) Unemployment insurance taxes	_____
3) Workmen's compensation insurance	_____
4) Other employer's taxes (explain)_____	
_____	_____

12. Please add any comments you may have in regard to your contract(s), pupil transportation in Maryland, or on our questionaire. Thank you.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

APPENDIX VI

PRO FORMA COSTS OF PUPIL TRANSPORTATION IN ANNE ARUNDEL COUNTY

SCHEDULE VI-1

ANNE ARUNDEL COUNTY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION IN 1969-70

Type of Expenditure	Actual Expenditures 1969-1970	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Contract Services	$1,853,039			$2,010,707
Special transportation for public school children	74	$74	$74	74
Operation of publicly owned buses	109,073	1,254,671	1,372,570	
Special transportation for nonpublic handicapped children	5,052	5,052	5,052	5,052
Special transportation for handicapped children to the Maryland school for the deaf and blind	3,521	3,521	3,521	3,521
Bus inspections	3,190	3,190	3,190	3,190
Property damage and medical insurance paid by local unit	31,239	31,239	31,239	31,239
Salaries and travel costs of supervisors and salaries of clerks	65,002	65,002	65,002	65,002
Cost of materials of instruction	1,872	1,872	1,872	1,872
Reimbursement for drivers' participation in training program	3,072	5,910	5,910	3,072
Salaries of aides	31,410	31,410	31,410	31,410
Expenditures for capital facilities		18,663	10,750	2,900
Expenditures for vehicles	19,050	388,432	383,482	3,024
Other	7,290	75,919	58,124	6,246
Total allowances for state aid purposes	$2,132,889	$1,884,955	$1,972,196	$2,167,309
Less: prorated cost of nonpublic pupils	(5,124)	(5,124)	(5,124)	(5,124)
Total state aid	$2,127,695	$1,879,831	$1,967,072	$2,162,185

SCHEDULE VI-2

ANNE ARUNDEL COUNTY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION

NOT QUALIFYING FOR STATE REIMBURSEMENT IN 1969-70

	Pro Forma Costs Assuming:		
	Public Ownership	Public Ownership without Vertical Integration	Private Ownership
Total state aid	$1,879,831	$1,967,072	$2,162,185
Contract services			433
Operation of publicly owned buses	33,734	33,734	
Salaries and travel cost of supervisors and salaries of clerks	134,502	124,502	20,109
Salaries of aides	1,029	1,029	1,029
Expenditures for capital facilities	19,287		
Other	32,716	14,973	3,064
Miscellaneous			
Stationery, office supplies, postage	1,875	1,750	1,125
Custodial supplies, utilities, and heat	5,000	875	875
Telephone and telegraph	1,000	1,000	1,000
Legal and accounting	18,500	18,500	3,700
Total state aid and unallowed costs	$2,127,474	$2,163,435	$2,193,520
Adjustment to an accrual basis of accounting:			
Deduct: expenditures for capital facilities and vehicles	(426,382)	(394,232)	(5,924)
Add: depreciation and amortization	237,374	205,224	5,924
Total state aid and unallowed costs on an accrual basis	$1,938,466	$1,974,427	$2,193,520
Cost of capital (6% per annum or depreciated book value)	111,818	98,310	903
Federal, state, and local taxes not collected by virtue of public ownership	68,194	66,328	609
Total costs stated on a comparable, accrual basis	$2,118,478	$2,139,065	$2,195,032

SCHEDULE VI-3

ANNE ARUNDEL COUNTY

PRO FORMA COST OF CONTRACT SERVICES

WITH PRIVATE OWNERSHIP

Allowance for depreciation and interest		
Total allowed cost of county vehicles	$193,478	
Less: excess over maximum allowed	17,095	
Total allowed cost for formula purposes	$176,383	
Factor per formula	x .185	$32,631
Allowance for drivers' salaries		66,886
Allowance for fixed costs		
Allowance for fixed costs per vehicle	$125	
Number of vehicles	x 31	3,875
Allowance for gasoline, oil, grease, tires, antifreeze, and maintenance		
12 passenger vans		
Annual mileage	161,520	
Factor	x $.0792	12,792
30 passenger buses		
Annual mileage	17,444	
Factor	x $.1313	$2,290
36 passenger buses		
Annual mileage	183,402	
Factor	x $.1334	24,466
48 passenger buses		
Annual mileage	36,926	
Factor	x $.1404	5,184
54 passenger buses		
Annual mileage	64,576	
Factor	x $.1478	9,544
Subtotal: cost of contract operation of routes served in 1969-70 by publicly owned vehicles		$157,668
Contract services 1969-70		1,853,039
Total cost of contract services with private ownership		$2,010,707

SCHEDULE VI-4

ANNE ARUNDEL COUNTY

PRO FORMA COST OF OPERATION WITH PUBLIC OWNERSHIP

Drivers' salaries for 183 days @ $4,257.74		$779,166
Repairs, maintenance, gas, oil, antifreeze and other costs		
12 passenger vans		
Annual mileage	161,520	
Factor	x $.07624	12,314
30/36 passenger buses		
Annual mileage	200,846	
Factor	x $.1156	23,218
48 passenger buses		
Annual mileage	36,926	
Factor	x $.1156	4,269
54/55 passenger buses		
Annual mileage	74,641	
Factor	x $.1153	8,606
60 passenger buses		
Annual mileage	3,900,407	
Factor	x $.1153	449,716
67 passenger buses		
Annual mileage	64,965	
Factor	x $.1711	11,116
Subtotal: cost of operation		$1,288,405
Less: excess cost not allowed for state aid purposes		33,734
Total cost of operation for state aid purposes		$1,254,671

SCHEDULE VI-5

ANNE ARUNDEL COUNTY

PRO FORMA COST OF OPERATION WITH

PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Drivers' salaries for 183 days @ $4,257.74		$779,166
Repairs, maintenance, gas, oil, antifreeze and other costs		
12 passenger vans		
Annual mileage	161,520	
Factor	x $.0777	12,550
30/36 passenger buses		
Annual mileage	200,846	
Factor	x $.1005	20,185
48 passenger buses		
Annual mileage	36,926	
Factor	x $.1005	37,111
54/55 passenger buses		
Annual mileage	74,641	
Factor	x $.1175	87,703
60 passenger buses		
Annual mileage	3,900,407	
Factor	x $.1175	458,298
67 passenger buses		
Annual mileage	64,965	
Factor	x $.1738	11,291
Subtotal: cost of operation		$1,406,304
Less: excess cost not allowed for state aid purposes		33,734
Total cost of operation for state aid purposes		$1,372,570

SCHEDULE VI-6

ANN ARUNDEL COUNTY

PRO FORMA TABLE OF ORGANIZATION WITH PUBLIC AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Position	Number of Employees in Position	Total Salaries	Total Travel	State Aid Salaries	State Aid Travel
I. ASSUMING PUBLIC OWNERSHIP					
Supervisor	1	$16,500	$920	$9,100	$ 500
Assistant Supervisor	1	15,000	920	8,880	500
Assistants in Transportation	6	72,377	3,462	31,200	2,000
Maintenance Supervisor	1	10,000			
Driver Trainer	1	10,000			
Clerks	4	20,772		12,822	
Custodian	1	5,000			
Substitute Drivers (see note)	22	44,553			
Subtotal Administration	37	$194,202	$5,302	$62,002	$3,000
Bus Drivers	382	$779,166		$745,432	
Bus Aides	24	32,440		31,410	
Maintenance Staff	27	157,856		157,856	
Maintenance Clerks	1	5,193		5,193	
Custodian	1	5,000		5,000	
Subtotal Operation	435	$979,655		$944,891	
Total	472	$1,173,857	$5,302	$1,006,893	$3,000
II. ASSUMING PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION					
Supervisor	1	$16,500	$920	$9,100	$500
Assistant Supervisor	1	15,000	920	8,880	500
Assistants in Transportation	6	72,377	3,462	31,200	2,000
Maintenance Supervisor					
Driver Trainer	1	10,000			
Clerks	4	20,772		12,822	
Custodian	1	5,000			
Substitute Drivers (see note)	22	44,553			
Subtotal Administration	36	$184,202	$5,302	$62,002	$3,000
Bus Drivers	392	$779,166		$745,432	
Bus Aides	24	32,440		31,410	
Mechanics					
Maintenance Clerk					
Custodian					
Subtotal Operation	416	$811,606		$776,842	
Total	452	$995,808	$5,302	$838,844	$3,000

Note: Assuming 5.7% absenteeism

SCHEDULE VI-7

ANNE ARUNDEL COUNTY VEHICLES IN SERVICE AT SEPTEMBER 1, 1969

Type of Vechicle	Model-Year of Vehicles	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-1970	Average Book Value 1969-1970	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
Contractor Owned Vehicles:							
-55 passenger bus, adapted for transporting handicapped children	1957	1	$5045*		$504*	$7800	$7800
-60 passenger bus	1958	5	$ 24457*		$ 2446*	$ 37806	7561
	1959	18	85305*		8531*	131868	7326
	1960	17	73878*	$ 6649*	10712*	114203	6718
	1961	19	82257*	7403*	19330*	127155	6692
	1962	37	167766*	15099*	54524*	259338	7009
	1963	57	261786*	23561*	108641*	404677	7100
	1964	34	157567*	14181*	79571*	243573	7164
	1965	27	123746*	11137*	73629*	191290	7085
	1966	33	149729*	13476*	102564*	231456	7014
	1967	33	191153*	17204*	148144*	243693	7385
	1968	34	217312*	19558*	187975*	264885	7791
	1969	42	307898*	27711*	294043*	335803	7995
	1970	1	7427*	668*	7093*	8100	8100
Sub totals		357	$1850281	$156647	$1097203	$2593847	
-67 passenger bus	1958	1	$9381*	$563*	$2908*	$14500	14500
	1961	1	7158*	429*	3507*	11065	11065
	1962	1	9057*	543*	4981*	14000	14000
	1969	1	11498*	670*	11153*	12540	12540
Sub totals		4	$37094	$2205	$22549	$52105	
County Owned Vehicles:							
-12 passenger vans	1965	4	$12635	$2274	$2401	$19531*	4883*
	1967	2	7275	1310	4001	9275*	4638*
	1968	5	21165	3810	15450	25798*	5160*
Sub totals		11	$41075	$7394	$21852	$54604	
-30 passenger bus	1968	1	$5080	$457	$4394	$6192*	6192*
-36 passenger bus	1964	1	$4035	$363	$2038	$6237*	6237*
	1965	3	12392	1115	7373	19155*	6385*
	1966	3	12718	1145	8712	19660*	6553*
	1967	4	21510	1936	16670	27422*	6856*
	1970	2	11303	1017	10794	12327*	6164*
Sub totals		13	$61958	$5576	$45587	$84801	

SCHEDULE VI-7

ANNE ARUNDEL COUNTY VEHICLES IN SERVICE AT SEPTEMBER 1, 1969

Type of Vehicle	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-1970	Book Value 12/31/69	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
County Owned Vehicles:							
-48 passenger bus	1963	3	$13367	$1203	$5547	$20663*	6888*
-54 passenger bus	1968	2	$15399	$1386	$13320	$18770*	9385*
	1969	1	7746	697	7397	8448*	8448*
Sub totals		3	$23145	$2083	$20717	$27218	
Totals		393	$2037045	$175565	$1218353	$2847230	

* Pro forma

SCHEDULE VI-8

ANNE ARUNDEL COUNTY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED WITH

PUBLIC AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Description of Asset	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. PUBLIC OWNERSHIP			
36 spare buses - 10% of contractor vehicles in service during 1969-70	$189,242	$15,885	$112,026
4 emergency trucks	9,000	1,620	4,950
2 tow trucks	18,500	3,330	10,176
9 automobiles	16,812	3,024	9,246
3500 sq.ft. office facility	35,000	1,400	17,500
2 maintenance facilities with fencing and paving	450,000	18,000	225,000
20 acres of land	200,000		200,000
Shop equipment	75,000	15,000	37,500
Office equipment	7,500	1,500	3,750
Base radio station	3,500	700	1,750
9 mobile radio units	6,750	1,350	3,375
Inventory - 30 days on parts, tires, gas, and oil	20,000		20,000
Total other assets employed	$1,031,304	$61,809	$645,273
II. PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION			
36 spare buses - 10% of contractor vehicles in service in 1969-70	$189,242	$15,885	$112,026
9 automobiles	16,812	3,024	9,246
3500 sq.ft. office facility	35,000	1,400	17,500
Base radio station	3,500	700	1,750
9 mobile radio units	6,750	1,350	3,375
Fencing and paving for 20 acres	145,000	5,800	72,500
10 acres of land	200,000		200,000
Office equipment	7,500	1,500	3,750
Total other assets employed	$603,804	$29,659	$420,147

SCHEDULE VI-9

ANNE ARUNDEL COUNTY
PRO FORMA OTHER EXPENDITURES

	Actual Expenditures 1969-70	Pro forma Costs Assuming Public Ownership	Pro forma Costs Assuming Public Ownership Without Vertical Integration	Pro forma Costs Assuming Private Ownership
Allowances for State Aid				
Supplies for testing carbon monoxide	$ 126	$ 126	$ 126	$ 126
Allowed transportation costs not elsewhere reimbursed	240	240	240	240
Retirement		8,440	1,904	2,075
Social Security	4,800	48,216	40,150	2,861
Workmen's Compensation	2,124	18,897	15,704	944
Subtotal: Allowances for State Aid Purposes	$7,290	$ 75,919	$58,124	$6,246
Excess Over Allowances for State Aid				
"No Smoking" signs 500 @ $.60	$ 300	$ 300	$ 300	$ 300
Bus Aides Institute	158	157	157	157
Retirement		5,669	4,637	987
Social Security	212	6,774	5,763	261
Workmen's Compensation	96	3,256	3,066	684
Life/Health Insurance		3,300	1,050	675
Holiday pay		6,946		
Vacation pay (hourly)		6,314		
Subtotal: Excess of Cost Over Allowances	$ 766	$ 32,716	$14,973	$3,064
Total	$8,056	$108,635	$73,097	$9,310

SCHEDULE VI-10

ANNE ARUNDEL COUNTY

FEDERAL, STATE, AND LOCAL TAXES NOT COLLECTED BY

VIRTUE OF PUBLIC OWNERSHIP

	Taxes Imputed for	
	Public Ownership	Public Ownership Withou Vertical Integration
Federal Excise Taxes		
Bus chassis and bodies		(see note)
Parts and accessories	$13,580	$18,814
Gasoline		(see note)
Lubricating oil	355	355
Tires	1,127	1,127
Subtotal	$15,062	$20,296
State License Fees, Excise, Sales and Other Taxes		
Vehicle license fees	$ 8,890	$ 8,700
Title tax on vehicles	15,218	15,218
Motor fuel tax		(see note)
Unemployment compensation tax	14,460	13,560
General property tax @ $.20 per $100 assessed value	611	359
Subtotal	$39,179	$37,837
Local Taxes		
General property tax @ $4.57 per $100 assessed value	$13,953	$ 8,195
Total	$68,194	$66,328

Note: Both public and private operators are exempt from federal excise taxes on bus chassis, bus bodies, and gasoline. Both public and private operators pay Maryland's motor fuel tax.

APPENDIX VII

PRO FORMA COSTS OF PUPIL TRANSPORTATION IN BALTIMORE CITY

SCHEDULE VII-1

BALTIMORE CITY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION IN 1969-70

Type of Expenditure	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Contract Services - Student tickets redeemable for transportation by the Baltimore Transit Co.	$2,818,037	$2,818,037	$2,818,037	$2,818,037
Contract Services - Other	476,131			816,057
Special transportation for public school children				
Operation of publicly-owned buses	540,553	591,135	538,077	
Special transportation for non-public handicapped children	98,920	98,920	98,920	98,920
Bus inspections				1,890
Property damage, liability, and medical insurance paid by local unit:				
Contract				
Publicly-owned	19,775	33,280	33,280	
Salaries and travel costs of supervisors and salaries of clerks	14,738	14,738	14,738	10,236
Cost of materials of instruction				
Reimbursement for driver participation in training program				
Salaries of aides	77,658	77,658	77,658	77,658
Expenditures for capital facilities		25,800	15,800	6,600
Expenditures for vehicles	992,624	992,624	992,624	
Other	56,644	127,021	112,774	3,301
Total Allowances for State Aid	$5,095,080	$4,779,213	$4,701,908	$3,832,699
Less: Prorated Cost of Non-Public Pupils				
Total State Aid	$5,095,080	$4,779,213	$4,701,908	$3,832,699

SCHEDULE VII-2

BALTIMORE CITY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION NOT QUALIFYING FOR STATE REIMBURSEMENT IN 1969-70

	Pro Forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Total State Aid	$4,779,213	$4,701,908	$3,832,699
Contract Services	53,696	53,696	53,696
Operating Costs of Publicly-Owned Buses	260,179	193,571	
Salaries and Travel Costs of Supervisors and Salaries of Clerks	77,728	67,898	33,091
Reimbursement for Drivers Participation in Training Program	6,250	6,250	2,491
Salaries of Aides	25,816	25,816	25,816
Other	197,434	177,279	22,716
Miscellaneous			
- custodial supplies	750	750	250
- telephone and telegraph	500	500	500
- legal and accounting	47,500	47,500	9,500
Total State Aid and Unallowed Costs	$5,449,066	$5,275,168	$3,980,759
Adjustment to an Accrual Basis of Accounting			
Deduct: Expenditures for Capital Facilities and Vehicles	(1,018,424)	(1,008,424)	(6,600)
Add: Depreciation and Amortization	187,866	173,866	6,600
Total State Aid and Unallowed Costs on an Accrual Basis	$4,618,508	$4,440,610	$3,980,759
Imputed Cost of Capital (6% per annum on depreciated book value)	126,890	121,865	1,470
Federal, State, and Local Taxes not Collected by Virtue of Public Ownership	94,869	85,044	1,504
Total Costs Stated on a Comparable, Accrual Basis	$4,840,267	$4,647,519	$3,983,733

SCHEDULE VII-3

BALTIMORE CITY

PRO FORMA COST OF CONTRACT OPERATION, ASSUMING THE APPLICATION OF THE STATE FORMULA

Allowance for Depreciation and Interest		
Allowed Cost of Vehicles		
12 passenger and less (54 vehicles)	$ 172,825	
60 passenger (132 vehicles)	986,031	
Modified 60 passenger (3 vehicles)	54,412	
Total Allowed Cost of Vehicles	$1,213,268	
Factor per Forma	x .185	$224,455
Allowance for Drivers' Salaries		
Total drivers' hours supplied in 1969-70 by contractors	34,338	
Total drivers' hours supplied in 1969-70 by city	118,252	
Total Drivers' Hours 1969-70	$ 152,590	
Hourly Wage per Formula	X $2.83	431,830
Allowance for Fixed Costs		
Allowance for Fixed Costs per Vehicle	$ 125	
Number of Vehicles	x 189	23,625
Allowance for Gasoline, Oil, Grease, Antifreeze, Tires and Maintenance		
12 passenger vans and station wagons		
Annual mileage	527,302	
Factor per Formula	x $.0792	41,762
60 passenger		
Annual mileage - Contractors	224,103	
Annual mileage - City	369,142	
Total Annual Mileage	593,245	
Factor per Formula	x $.1591	94,385
Total Cost of Contract Services		$816,057

SCHEDULE VII-4

BALTIMORE CITY

PRO FORMA COSTS OF OPERATION WITH

PUBLIC OWNERSHIP

	May-June 1969	July, 1969-April, 1970	
Drivers' Salaries			
Total Hours	14671.5	137918.5	
Average Wage	x $2.84	x $3.78	
Total Salaries	$41,657	$521,332	$562,989
Maintenance, Repairs, and Other Expenditures			
- On Vehicles Provided by Contractors in 1969-70			
60 passenger buses			
Annual mileage		224,103	
Estimated cost per mile		x $.1159	25,974
- On Vehicles Operated by City (as reported)			264,108
Total Cost of Operation			$853,071
Less: Excess of Cost Over State Allowance			
Salaries in excess of allowance		$131,656	
Fringe benefits		35,496	
Miscellaneous labor and sick leave		41,392	
Other		53,392	(261,936)
Total Cost of Operation for State Aid Purposes			$591,135

SCHEDULE VII-5

BALTIMORE CITY

PRO FORMA COST OF OPERATION WITH

PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

	May-June 1969	July, 1969-April, 1970	
Drivers' Salaries			
Total Hours	14671.5	137918.5	
Average Wage	x $2.84	x $3.78	
Total Salaries	$41,657	$521,332	$562,989
Maintenance, Repairs, and Other Expenditures			
12 passenger vans and station wagons			
Annual mileage		527,302	
Estimated cost per mile		x $.0322	16,979
54/60 passenger buses			
Annual mileage		251,894	
Estimated cost per mile		x $.1184	29,824
45/73 passenger buses			
Annual mileage		341,351	
Estimated cost per mile		x $.1756	59,941
Total Cost of Operation			$669,733
Less: Salaries in Excess of State Allowance			131,656
Total Cost of Operation for State Aid Purposes			$538,077

SCHEDULE VII-6

BALTIMORE CITY

PRO FORMA TABLE OF ORGANIZATION WITH PUBLIC, PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION, AND PRIVATE OWNERSHIP

	Number of Employees in Position	Total Salaries	Total Travel	State Aid Salaries	State Aid Travel
I. Assuming Public Ownership					
Director of Transportation	1	$ 5,294*	$ 147	$ 2,871*	$ 147
Transportation Supervisor	1	11,564	272		
Assistant Transportation Supervisor	1	1,469*	36		
Assistants in Transportation	2	12,525*			
Auto Mechanic Foreman	1	9,830			
Clerks	6	14,437*		11,720*	
Custodian	1	4,802			
Substitute Drivers	10	32,090			
Subtotal Administration	23	$ 92,011	$ 455	$ 14,591	$ 147
Bus Drivers	189	$562,989		$ 431,333	
Bus Aides	104	103,544		77,658	
Maintenance Staff	25	102,534		102,534	
Auto Parts Clerk	2	13,216			
Custodian	3	15,827			
Bus Dispatcher	3	20,202			
Subtotal Operation	326	$818,312		$ 611,525	
Total	349	$910,323	$ 455	$ 626,116	$ 147
II. Assuming Public Ownership Without Vertical Integration					
Director of Transportation	1	$ 5,294*	$ 147	$ 2,871*	$ 147
Transportation Supervisor	1	11,564	272		
Assistant Transportation Supervisor	1	1,469*	36		
Assistants in Transportation	2	12,525*			
Clerks	6	14,437*		11,720*	
Custodian	1	4,802			
Substitute Drivers	10	32,090			
Subtotal Administration	22	$ 82,181	$ 455	$ 14,591	$ 147
Bus Drivers	189	$562,989		$ 431,333	
Bus Aides	104	103,544		77,658	
Custodian	3	15,827			
Bus Dispatcher	3	20,202			
Subtotal Operation	299	$702,562		$ 508,991	
Total	321	$784,743	$ 455	$ 523,582	$ 147
III. Assuming Private Ownership					
Director of Transportation	1	$ 5,294*	$ 147	$ 2,871*	$ 147
Transportation Supervisor	1	11,564	272		
Assistant Transportation Supervisor	1	1,469*	36		
Assistants in Transportation	2	12,525*			
Clerks	3	7,218*		7,218*	
Custodian	1	4,802			
Total	9	$ 42,872	$ 455	$ 10,089	$ 147

* Salary for less than 12 months.

SCHEDULE VII-7

BALTIMORE CITY

VEHICLES IN SERVICE MAY 1, 1969-APRIL 30, 1970

Type of Vehicle	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-70	Book Value	Allowed Cost of Vehicles	Average Allowed Cost Per Vehicle
Various vehicles provided under contract (see notes 1 and 2)	N/A	73	$ 393,102	$ 35,379	$ 245,280	$ 545,305	$ 7,470
City-Owned Vehicles							
9 passenger station wagons	1968	4	$ 8,708	$ 1,567	$ 6,357	$ 10,614	$ 2,653
12 passenger vans	1969	50	148,732	26,772	135,346	162,211	3,244
45 passenger buses (see note 3)	1970	34	527,456	31,647	511,632	575,260	16,919
54 passenger buses	1963	1	15,999	1,440	6,640	24,732	24,732
	1964	1	16,250	1,463	8,206	25,120	25,120
60 passenger buses	1962	1	15,999	1,440	5,200	24,731	24,731
	1963	1	6,164	555	2,558	9,529	9,529
73 passenger buses (pushers)	1961	2	27,974	1,678	13,707	42,197	21,099
	1962	3	29,648	1,779	16,306	45,830	15,276
	1963	11	112,889	6,773	68,862	174,507	15,864
	1964	4	42,531	2,552	28,496	65,746	16,436
	1965	4	47,156	2,829	34,424	72,895	18,224
	1967	6	94,337	5,660	80,186	120,266	20,044
	1968	13	210,646	12,639	191,688	256,760	19,750
	1970	30	398,656	23,919	386,696	434,786	14,492
Subtotal		165	$1,703,145	$122,713	$1,496,304	$2,045,184	
Total		238	$2,096,247	$158,066	$1,741,584	$2,590,489	

Note: 1. According to the bid specification, each bus provided had a minimum seating capacity of not less than sixty (60) school children.

2. All cost data reflect ADL estimates.

3. These buses are "73" passenger pushers with a 54 seat configuration for handicapped children.

SCHEDULE VII-8

BALTIMORE CITY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED WITH PUBLIC,

PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION, AND PRIVATE OWNERSHIP

Description of Assets	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. Public Ownership			
Shops, Garages, and Parking Facilities (see note)	$250,000	$10,000	$125,000
Land	150,000		150,000
Shop Equipment	50,000	10,000	25,000
Service and Tow Trucks	20,000	4,000	10,000
Office Equipment	7,500	1,500	3,750
5 - Automobiles	10,500	2,100	5,250
Radio Equipment	11,000	2,200	5,500
Inventory - 30 days on parts, tires, oil and gasoline	15,000		15,000
Total	$514,000	$29,800	$339,500
II. Public Ownership Without Vertical Integration			
Garage and Parking Facilities (see note)	$250,000	$10,000	$125,000
Land	150,000		150,000
Office Equipment	7,500	1,500	3,750
5 - Automobiles	10,500	2,100	5,250
Radio Equipment	11,000	2,200	5,500
Total	$429,000	$15,800	$289,500
III. Private Ownership			
Office Equipment	$ 7,500	$ 1,500	$ 3,750
5 - Automobiles	10,500	2,100	5,250
Radio Equipment	11,000	2,200	5,500
Prorata Cost of Office Facility 2,000 sq. ft.	20,000	800	10,000
Total	$ 49,000	$ 6,600	$ 24,500

Note: One of the city's two major facilities is leased.

SCHEDULE VII-9

BALTIMORE CITY

PRO FORMA OTHER EXPENDITURES

	Pro Forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Allowances for State Aid			
Retirement	$ 28,426	$ 23,771	$ 458
Social Security	30,054	25,132	484
Workman's Compensation	11,896	9,948	192
Diesel Fuel Tax	4,313	4,313	
Rental of Garage	24,917	24,917	
Fuel Oil	1,147	1,147	114
Garage Supplies	143		
Equipment	898	898	
Stationery and Supplies	551	551	551
Printing of Bus Tickets	675	675	675
Miscellaneous	14	14	14
Bus Washing Equipment	1,675	1,675	
Operation of Service Vehicles	2,579		
Custodial Salaries	11,604	11,604	
Gas and Electric	8,129	8,129	813
Subtotal-Allowances for State Aid Purposes	$127,021	$112,774	$ 3,301
Costs not Allowed for State Aid Purposes			
Retirement	$ 17,174	$ 15,549	$ 1,512
Social Security	17,878	16,259	1,418
Workman's Compensation	7,187	6,507	633
Life/Health Insurance	43,625	40,125	1,125
Vacation Pay	42,758	36,972	240
Holiday Pay	51,312	44,367	288
Data Processing (bus tickets)	17,500	17,500	17,500
Subtotal-Excess Costs Over Allowances for State Aid	$197,434	$177,279	$22,716
Total	$324,455	$290,053	$26,017

SCHEDULE VII-10

BALTIMORE CITY

FEDERAL, STATE, AND LOCAL TAXES NOT COLLECTED BY VIRTUE OF PUBLIC OWNERSHIP

	Taxes Imputed for		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Federal Excise Taxes			
Bus chassis and bodies		(see note)	
Parts and accessories	$ 7,736	$ 2,846	
Motor fuel		(see note)	
Lubricating oil	90	90	
Tires	867	867	
Subtotal	$ 8,693	$ 3,803	
State License Fees, Excise, Sales, and Other Taxes			
Vehicle license fees	$ 4,020	$ 3,880	$ 100
Title tax on vehicles	39,705	39,705	
Motor fuel tax		(see note)	
Unemployment compensation	31,410	28,890	810
General property tax @ $.20 per $100 of assessed value (60%)	430	341	23
Subtotal	$75,565	$72,816	$ 933
Local Taxes			
General property tax @ $4.94 per $100 of assessed value (60%)	10,611	8,425	571
Total	$94,869	$85,044	$1,504

Note: Both public and private operators are exempt from federal excise taxes on bus chassis, bus bodies, and gasoline. Both public and private operators pay Maryland's motor fuel tax.

APPENDIX VIII

PRO FORMA COSTS OF PUPIL TRANSPORTATION IN FREDERICK COUNTY

SCHEDULE VIII-1

FREDERICK COUNTY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION IN 1969-70

Type of Expenditure	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Contract Services	$330,409			$799,602
Special transportation for public school children	1,912	$ 1,912	$ 1,912	1,912
Operation of publicly-owned buses	256,013	470,225	456,031	
Special transportation for handicapped children to Maryland schools for the deaf and blind	873	873	873	873
Bus inspections	868		868	868
Property damage and medical insurance paid by local unit	7,420	7,420	7,420	7,420
Salaries and travel costs of supervisors and salaries of clerks	25,560	25,560	25,560	25,560
Cost of materials of instruction	45	250	250	45
Reimbursement for drivers' participation in training program	1,710	3,230	3,230	1,710
Salaries of aides				
Expenditures for capital facilities		6,838	5,850	
Expenditures for vehicles	87,275	122,846	122,846	
Other	29,029	51,509	41,823	8,065
Total Allowances for State Aid Purposes	$741,114	$690,663	$666,663	$846,055
Less: Prorated Cost of Non-Public Pupils	(28,842)	(28,842)	(28,842)	(28,842)
Total State Aid	$712,272	$661,821	$637,821	$817,213

SCHEDULE VIII-2

FREDERICK COUNTY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION

NOT QUALIFYING FOR STATE REIMBURSEMENT

IN 1969-70

	Pro forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Total State Aid	$661,821	$637,821	$817,213
Contract Services			1,338
Operation of Publicly Owned Buses	1,812	1,812	
Salaries and Travel Costs of Supervisors and Salaries of Clerks	76,020	66,020	19,561
Expenditures for Capital Facilities	10,112		2,950
Expenditures for Vehicles	3,819	1,344	672
Other (fringe benefits)	17,952	9,307	1,706
Prorated Cost of Nonpublic Pupils	28,842	28,842	28,842
Miscellaneous			
-Stationary, Office Supplies, Postage	1,125	1,000	500
-Custodial Supplies, Utilities, and Head	2,500	500	500
-Telephone and Telegraph	500	500	500
-Legal and Accounting	6,500	6,500	1,500
Total State Aid and Unallowed Costs	$811,003	$753,646	$875,282
Adjustment to an Accrual basis of Accounting			
Deduct Expenditures for Capital Facilities and Vehicles	(143,615)	(130,040)	(3,622)
Add: Depreciation and Amortization	$105,967	$92,392	$3,622
Total State Aid and Unallowed Costs on Accrual Basis	773,355	715,998	875,282
Inputed Cost of Capital (6% per annum on Depreciated Book Value)	43,442	37,213	1,169
Federal, State, and Local Taxes not Collected by Virture of Public Ownership	27,920	25,743	247
Total Costs Stated on a Comparable, Accrual Basis	$844,717	$778,954	$876,698

SCHEDULE VIII-3

FREDERICK COUNTY

PRO FORMA COST OF CONTRACT OPERATION OF ROUTES SERVED IN 1969-70 BY PUBLICLY OWNED VEHICLES

		Maximum Allowance per Formula
Allowance for Depreciation and Interest		
Total Allowed Cost of County Vehicles	$799182	
Less: Excess Cost over Maximum Allowed	3014	
Total Allowed Cost for Formula Purposes	$796168	
Factor per formula	x.185	$147291
Allowance for Driver's Salaries		
Total Allowed Hours for Year	551925	
Allowed Hourly Wage	x$2.83	156194
Allowance for Fixed Costs		
Allowance for Driver's Salaries	$ 125	
Factor per Formula	x124	15500
Allowance for Gasoline, Oil, Grese, Anti-freeze, Tires, and Maintenance		
9 passenger station wagons		
Annual Mileage	164151	
Factor	x.0792	13001
48 passenger buses		
Annual Mileage	5134	
Factor	x.1498	769
55 passenger buses		
Annual Mileage	78507	
Factor	x.1541	12098
60 passenger buses	781519	
	x.1591	124340
Subtotal: Cost of Contract Operation of Routes Served in 1969-70 by Publicly Owned Vehicles		$ 469193
Contracts Services 1969-70		$ 330409
Total Cost of Contract Operation		$ 799602

SCHEDULE VIII-4

FREDERICK COUNTY

PRO FORMA COST OF OPERATION WITH PUBLIC OWNERSHIP

Driver's Salaries 183 Days @ $1438.92	$263323
Repairs, Maintenace, Gas, Oil, Anti-freeze, and Other Costs	
9 passenger station wagon	
164151 miles/year	
x$.0759 /mile	12459
48 passenger buses	
175123 miles/year	
x$.1152 /mile	20174
54/55 passenger buses	
152091 miles/year	
x$.1150	17490
60 passenger buses	
1379051 miles/year	
x$.1150 /mile	158591
Total Cost of Operation with Public Ownership	$472037
Less: Excess Over Allowances for State Aid	1812
Total Cost of Operation for State Aid Purposes	$470225

SCHEDULE VIII-5

FREDERICK COUNTY

PRO FORMA COST OF OPERATION WITH PUBLIC OWNERSHIP

WITHOUT VERTICAL INTEGRATION

Driver's Salaries 183 Days @ $579.47	$106043
Repairs, Maintenance, Gas, Oil, Anti-freeze, and Other Costs.	
48 passenger buses	
169988.7 miles/year x$.1011 /mile	17186
54 passenger buses	
73584.3 miles/year x$.11712 /mile	8618
60 passenger buses	
597531.5 miles/year x$.11712 /mile	69983
Subtotal: Cost of Operation on Routes Served in 1969-70 by Contractors	$201830
Cost of Operation on Routes Served in 1969-70 by Publicly Owned Vehicles	256013
Total Cost of Operation with Public Ownership	$457843
Less: Excess Over Allowance for State Aid	1812
Total Cost of Operation for State Aid Purposes	$456031

SCHEDULE VIII-6

FREDERICK COUNTY

PRO FORMA TABLE OF ORGANIZATION WITH

PUBLIC AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Positions	Number of Employees in Position	Total Salaries	Total Travel	State Aid Salaries	State Aid Travel
I. Assuming Public Ownership					
Supervisor	1	$ 15,280	$ 661	$ 10,800	$ 500
Assistant Supervisor	2	25,250	1,630	9,360	500
Maintenance Supervisor	1	10,000			
Clerks	3	18,000		4,400	
Custodian	1	5,000			
Substitute Drivers (see note)	8	15,009			
Driver Trainer	1	10,000	750		
Subtotal Administration	17	$ 98,539	$3,041	$ 24,560	$1,000
Bus Drivers	158	$263,322		$261,510	
Bus Aides					
Maintenance Staff	11	68,876		68,876	
Maintenance Secretary/Clerk	1	5,000		5,000	
Maintenance Custodian	1	5,000		5,000	
Subtotal Operation	171	$342,198		$340,386	
Total	188	$440,737	$3,041	$364,946	$1,000
II. Assuming Public Ownership Without Vertical Integration					
Supervisor	1	$ 15,280	$ 661	$ 10,800	$ 500
Assistant Supervisor	2	25,250	1,630	9,360	500
Clerks	3	18,000		4,400	
Custodian	1	5,000			
Substitute Drivers (see note)	8	15,009			
Driver Trainer	1	10,000	750		
Subtotal Administration	16	$ 88,539	$3,041	$ 24,560	$1,000
Bus Drivers	158	$263,322		$261,510	
Bus Aides					
Subtotal Operation	158	$263,322		$261,510	
Total	174	$351,861	$3,041	$286,070	$1,000

Note: Assuming 5.7% absenteeism

SCHEDULE VIII-7

FREDERICK COUNTY

VEHICLES IN SERVICE AT SEPTEMBER 1, 1969

Type of Vehicle	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969 - 70	Book Value 12/31/69	Allowed Cost of Vehicles	Average Allowed Cost Per Vehicle
Contractor Owned Vehicles:							
- 48 passenger buses	1960	1	$3,665*	$330*	$531*	$5,666	$5,666
	1961	12	47,334*	4,260*	11,123*	73,171	6,098
	1962	1	3,744*	337*	1,217*	5,788	5,788
- 54 passenger buses	1960	2	7,706*	694*	1,117*	11,913	5,957
	1961	3	12,226*	1,100*	2,873*	18,899	6,300
	1962	1	3,569*	321*	1,160*	5,517	5,517
	1966	1	4,794*	431*	3,284*	7,412	7,412
- 60 passenger buses	1960	4	18,043*	1,624*	2,616*	27,892	6,973
	1961	9	43,061*	3,875*	10,119*	66,565	7,396
	1962	5	21,844*	1,966*	7,099*	33,767	6,753
	1963	2	9,097*	819*	3,775*	14,063	7,031
	1964	3	14,387*	1,295*	7,265*	22,240	7,413
	1965	5	23,900*	2,151*	14,221*	36,945	7,389
	1966	5	22,345*	2,011*	15,306*	34,542	6,908
	1967	3	17,069*	1,536*	13,228*	21,761	7,254
	1968	6	36,918*	3,323*	31,934*	45,000	7,500
	1969	5	33,798*	3,042*	32,277*	36,861	7,372
Subtotals		68	$323,500	$29,115	$159,145	$468,002	

*Pro Forma

SCHEDULE VIII-8

FREDERICK COUNTY

VEHICLES IN SERVICE AT SEPTEMBER 1, 1969

Type of Vehicle	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-70	Book Value 12/31/69	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
County-Owned Vehicles:							
- 48 passenger buses	1960	1	$ 1,454[1]	$ 131	$ 1,258	$ 1,454[1]*	$1,454[1]*
- 55 passenger buses	1968	13	71,169	6,405	61,561	86,749*	6,673*
- 60 passenger buses	1960	9	38,271	3,444	5,549	59,161*	6,573*
	1961	12	48,348	4,351	11,362	74,738*	6,228*
	1962	9	37,712	3,394	12,256	58,296*	6,477*
	1963	7	31,435	2,829	13,046	48,593*	6,942*
	1964	7	29,908	2,692	15,104	46,233*	6,605*
	1965	12	51,155	4,604	30,437	79,077*	6,590*
	1966	14	62,365	5,613	42,720	96,406*	6,886*
	1967	7	36,918	3,323	28,611	47,065*	6,724*
	1968	11	70,155	6,314	60,684	85,513*	7,774*
	1969	12	81,274	7,315	77,617	88,640*	7,387*
- 9 passenger station wagon	1964	2	3,582		358	5,537*	2,769*
	1965	2	3,232	582	614	4,996*	2,498*
	1966	2	3,750	675	1,388	5,797*	2,899*
	1968	2	3,936	708	2,873	6,084*	3,042*
	1969	2	4,395	791	3,999	4,793*	2,397*
Subtotals		124	579,059	53,171	369,423	799,182	
Totals		192	$902,559	$82,286	$528,568	$1,267,184	

Notes: 1. Acquired 8/68 from retiring contractor

* Proforma

SCHEDULE VIII-9

FREDERICK COUNTY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED

WITH PUBLIC AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Description of Assets	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. Public Ownership			
Spare buses - 10% of Contractor Vehicles in Service in 1969-70	$ 32350	$2912	$15915
2 - Emergency Truck	4500	810	2475
1 - Tow Truck	9250	1665	5088
4 - Automobiles	7472	1344	4108
2000 Sq. Ft. Office Facility	20000	800	10000
4 - Bay Maintenance Facility, Fencing, Paving	225000	9000	112500
Land - 10 Acres	20000		20000
Shop Equipment	25000	5000	12500
Office Equipment	5000	1000	2500
Base Radio Station	3500	700	1750
3 - Mobile Radio Units	2250	450	1125
Inventory - 30 Days on Parts, Tires, Gas and Oil	7500		7500
Total Other Assets Employed	$361822	$23681	$195461
II. Public Ownership Without Vertical Integration			
Spare buses - 10% of Vehicles in Service	$ 32350	$ 2912	$ 15915
4 - Automobiles	7472	1344	4108
2000 Sq. Ft. Office Facility	20000	800	20000
Fencing, Paving for 10 Acres	72500	2900	36250
Land - 10 Acres	20000		20000
Office Equipment	5000	1000	2500
Base Radio Station	3500	700	1750
3 - Mobile Radio Units	2250	450	1125
Total Other Assets Employed	$163072	$10106	$101648

SCHEDULE VIII-10

FREDERICK COUNTY

PRO FORMA OTHER EXPENDITURES

	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Allowances for State Aid				
Allowed transportation costs not elsewhere reimbursed	$ 5,099	$ 5,099	$ 5,099	$5,099
Retirement	8,726	15,900	13,016	1,117
Social Security	8,253	17,299	13,512	960
Workman's compensation	6,951	13,211	10,356	889
Subtotal Allowances for State Aid Purposes	$29,029	$51,509	$41,983	$8,065
Excess Over Allowances For State Aid				
Retirement	$ 61	$ 4,154	$ 2,994	$ 413
Social Security	57	2,823	2,449	88
Workman's compensation	48	2,744	2,381	329
Life Insurance		135	120	45
Hospitalization		959	852	320
Holiday pay		3,471		
Vacation pay (hourly)		3,155		
Professional meetings and conferences	346	346	346	346
Professional work shops	165	165	165	165
Telephone service	250	(see note 1.)		
Utilities	150	(see note 1.)		
Subtotal Excess of Cost Over Allowances for State Aid	$ 1,077	$17,952	$ 9,307	$1,706
Total	$30,106	$69,461	$51,290	$9,771

Notes: 1. Costs for telephone service and utilities appear as itemized elements of per forma costs on Schedule VIII-2.

2. Retirement and Workman's Compensation have been computed at effective rates of 4.55%, and 3.62%, respectively, applied to all wages and salaries. This approach is consistent with the County's 1969-70 Request for State Aid.

SCHEDULE VIII-11

FREDERICK COUNTY

FEDERAL, STATE, AND LOCAL TAXES NOT COLLECTED BY VIRTUE OF PUBLIC OWNERSHIP

	Taxes Imputed for	
	Public Ownership	Public Ownership Without Vertical Integration
Federal Excise Taxes		
Bus chassis and bodies		(see note)
Parts and accessories	$ 5,510	$ 5,510
Gasoline		(see note)
Lubricating oil	150	150
Tires	4,743	4,743
Subtotal	$10,403	$10,403
State License Fees, Excise, Sales and Other Taxes		
Vehicle license fees	$ 4,065	$ 3,970
Title tax on vehicles	4,914	4,914
Motor fuel tax		(see note)
Unemployment compensation tax	5,640	5,220
General property tax @ $.20 per $100 assessed value	212	90
Subtotal	$14,831	$14,194
Local Taxes		
General property tax @ $2.54 per $100 assessed value	$ 2,686	$ 1,146
Total	$27,920	$25,743

Note: Both public and private operators are exempt from federal excise taxes on bus chassis, bus bodies, and gasoline. Both public and private operators pay Maryland's motor fuel tax.

APPENDIX IX

PRO FORMA COSTS OF PUPIL TRANSPORTATION IN GARRETT COUNTY

SCHEDULE IX-1

GARRETT COUNTY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION IN 1969-70

Type of Expenditures	Actual Expenditures 1969-1970	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Contract services	$448,260	$ 20,460	$ 20,460	$448,260
Special transportation for public school children	2,560	2,560	2,560	2,560
Operation of publicly owned buses	5,190	236,633	231,470	5,190
Special transporation for non-public handicapped children				
Special transportation for handicapped children to Maryland schools for the deaf and blind	680	680	680	680
Bus inspection	927		927	927
Property damage, liability and medical insurance paid by local unit	3,645	3,645	3,645	3,645
Salaries and travel costs of supervisors and salaries of clerks	13,402	13,402	13,402	13,402
Costs of materials of instruction	127	627	627	127
Reimbursement for driver participation in training program	272	750	750	272
Salaries of aides	2,840	2,840	2,840	2,840
Expenditures for capital facilities		3,852	3,774	
Expenditures for vehicles	19,187	92,268	92,268	19,187
Other	3,398	11,351	7,765	4,848
Total allowances for state aid purposes	500,489	389,068	381,168	501,938
Less prorated cost of non-public pupils				
Total state aid	$500,489	$389,068	$381,168	$501,938

SCHEDULE IX-2

GARRETT COUNTY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION

NOT QUALIFYING FOR STATE REIMBURSEMENT IN 1969-70

	Pro Forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Total State Aid	$389068	$381168	$501938
Contract Services	1130	1130	22520
Salaries and travel costs of supervisors and salaries of clerks	38450	23450	2646
Expenditures for capital facilities	12248	1226	1100
Expenditures for vehicles	2750	672	336
Other (fringe benefits)	7495	2745	731
Miscellaneous			
- Stationery, office supplies, postage	750	600	250
- Custodial supplies, utilities, heat	2375	375	375
- Telephone and telegraph	500	500	500
- Legal and accounting	3850	3800	1000
Total State Aid and Unallowed Costs	$458616	$415666	$531396
Adjustment to an accrual basis of accounting			
Deduct: Expenditures for capital facilities and vehicles	(111118)	(97940)	(20623)
Add: Depreciation and amortization	63201	53890	3411
Total State Aid and Unallowed Costs On An Accrual Basis	$410699	$371616	$514184
Imputed cost of capital (6% per annum on depreciated book value)	25445	19590	1785
Federal, state, and local taxes not collected by virtue of public ownership	16349	14454	222
Total Costs on a Comparable, Annual Basis	$452493	$405660	$516191

SCHEDULE IX-3

GARRETT COUNTY

PRO FORMA COSTS OF OPERATION WITH PUBLIC OWNERSHIP

Driver's Salaries	184 @ $697	$128,248
Repairs, Maintenance, Gas, Oil, Antifreeze and other costs		
30/36 passenger buses		
	76323.2 miles/year x $.1131 /mile	8,632
42/48 passenger buses		
	114448.0 miles/year x $.1128/mile	12,910
54 passenger buses		
	179657.6 miles/year x $.1128/mile	20,265
60/66 passenger buses		
	544216.8 miles/year x $.1128/mile	61,388
	Subtotal	$231,443
	Present cost of operation for publicly owned vehicles	5,190
	Total Cost of Operation	$236,633

SCHEDULE IX-4

GARRETT COUNTY

PRO FORMA COSTS OF OPERATION WITH PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Drivers's Salaries	184 @ $697	$128,248
Repairs, Maintenance, Gas, Oil, Antifreeze and other costs		
30/36 passenger buses 76323.2 miles/year x $.0994/mile		7,587
42/48 passenger buses 114448.0 miles/year x $.0994/mile		11,376
54 passenger buses 179657.6 miles/year x $.1164/mile		20,912
60/66 passenger buses 544216.8 miles/year x $.1164/mile		63,347
	Subtotal	$231,470
Present Cost of Operation for Publicly Owned Vehicles		5,190
	Total Cost of Operation	$236,660

SCHEDULE IX-5

GARRETT COUNTY

PRO FORMA OTHER EXPENSES

	Actual Expenditures 1969-70	Pro forma Costs Assuming Public Ownership	Pro forma Costs Assuming Public Ownership Without Vertical Integration	Pro forma Costs Assuming Private Ownership
Allowances for State Aid				
Crossing Watchman	$ 616	$ 616	$ 616	$ 616
Planetarium Trips	2204	2204	2204	2204
Transportation Charges for Pupil Attending West Virginia Schools	577	1882	577	577
Retirement/Pension		520	520	520
Social Security		4350	2716	667
Workmen's Compensation		1779	1132	264
Subtotal: Allowances for State Aid Purposes	$3397	$11,351	$7765	$4848
Excess Cost over Allowances for State Aid				
Retirement	$ 730	$1522	$ 922	$ 210
Social Security	801	1488	619	134
Workmen's Compensation	386	723	584	122
Life Insurance	79	365	155	79
Hospitalization	186	558	465	186
Holiday Pay		1487		
Vacation Pay (hourly)		1352		
Subtotal: Excess Cost over Allowances for State Aid	$2182	$7495	$2745	$ 731
TOTAL	$5579	$18,846	$10,510	$5579

SCHEDULE IX-6

GARRETT COUNTY

VEHICLES IN SERVICE SEPTEMBER 1, 1969

	Model Year	Number of Vehicles	Acquisition Cost	Provison for Depreciation 1969-70	Book Value	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
County Owned							
10 passenger van	1961	1	$ 2768	$ 249	$ 401	$ 4279*	$ 4279*
48 passenger buses	1969	2	19183	1726	18320	20922*	10461*
Subtotal		3	$ 21951	$ 1975	$ 18721	$ 25201	
Contractor Owned							
66 passenger bus	1969	1	$ 8042*	$ 724*	$ 7680*	$ 8225	8225
60 passenger buses	1960	2	9657*	869*	1400*	15654	
	1961	7	35154*	3164*	8261*	54025	7725
	1962	5	26134*	2352*	8494*	38625	7725
	1963	2	10946*	985*	4542*	15450	7725
	1964	5	25914*	2332*	13087*	38625	7725
	1965	7	36745*	3307*	21864*	54575	7796
	1966	7	36839*	3316*	25235*	54075	7725
	1967	2	13025*	1172*	10094*	15450	7725
	1968	3	21526*	1937*	18620*	23175	7725
	1969	5	40894*	3680*	39054*	38625	7725
	1970	2	16358*	1472*	15622*	15450	7725
Subtotal		48	$281234*	$25310*	$173953*	$371954	
54 passenger buses	1961	6	$ 27420*	$ 2468*	$ 6444*	$ 42150	7025
	1962	5	23782*	2140*	7729*	35125	7025
	1963	1	4981*	448*	2067*	7025	7025
	1964	2	9433*	849*	4764*	14050	7025
	1969	1	7443*	670*	7108*	7025	7025
Subtotal		15	$ 73059*	$ 6575*	$ 28112*	$105375	

SCHEDULE IX-6 (cont)

GARRETT COUNTY

VEHICLES IN SERVICE SEPTEMBER 1, 1969

Contractor Owned	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-70	Book Value	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
48 passenger buses	1960	1	$ 3960*	$ 356*	$ 574*	$ 6240	6240
	1961	2	8236*	741*	1935*	12650	6325
	1962	1	4286*	386*	1393*	6325	6325
	1964	1	4250*	383*	2146*	6325	6325
	1967	1	5340*	481*	4139*	6325	6325
Subtotal		6	$26072*	$2347*	$10187*	$37865	
42 passenger buses	1960	1	$ 3897*	$ 351*	$ 565*	$ 5607	5607
	1961	1	4052*	365*	952*	6225	6225
	1963	1	4409*	397*	1830*	6225	6225
	1964	1	4182*	376*	2112*	6225	6225
Subtotal		4	$16540*	$1489*	$ 5459*	$24282	
36 passenger buses	1960	2	$ 6906*	$ 622*	$ 1001*	$10518	5259
	1962	2	7476*	673*	2430*	11050	5525
	1963	1	3914*	352*	1624*	5525	5525
	1964	1	3707*	334*	1872*	5525	5525
Subtotal		6	$22003*	$1981*	$6927*	$32618	

SCHEDULE IX-6 (cont)

GARRETT COUNTY

VEHICLES IN SERVICE SEPTEMBER 1, 1969

	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-70	Book Value	Allowed Cost of Vehicles	Average Allowed Cost Per Vehicle
Contractor Owned							
30 passenger buses	1960	1	$3,453*	$311*	$501*	$4,863	$4,863
	1965	1	3,754*	338*	2,234*	5,525	5,525
Subtotal		2	7,207*	649*	2,735*	10,388	
Total		84	$448,066	$40,326	$246,094	$607,683	

*Pro Forma

SCHEDULE IX-7

GARRETT COUNTY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED

WITH PUBLIC, AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Description of Asset	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. Public Ownership			
8-Spare buses - 10% of vehicles in service	$44807	$4033	$24609
1-Emergency truck	2250	405	1237
1-Tow truck	9250	1665	5088
2-Automobiles	3736	672	2054
1500 sq. ft. office facility	15000	600	7500
4-Bay maintenance facility, fencing, paving	225000	9000	112500
Land-10 acres	5000		5000
Shop equipment	25000	5000	12500
Office equipment	2500	500	1250
Base radio station	3500	700	1750
2-Mobile radio units	1500	300	750
Inventory-30 days on parts, tires, gas and oil	3750		3750
Total Other Assets Employed	$341293	$22875	$177988
II. Public Ownership Without Vertical Integration			
8-Spare buses - 10% of vehicles in service	$44807	$4481	$24609
2-Automobiles	3736	672	2054
1500 sq. ft. office facility	15000	600	7500
Fencing, paving for 10 acres	72500	2900	36250
Land-10 acres	5000		5000
Office equipment	2500	500	2500
Base radio station	3500	700	1750
2-Mobile radio units	1500	300	750
	$148543	$10153	$80413

SCHEDULE IX-8

GARRETT COUNTY
PRO FORMA TABLE OF ORGANIZATION WITH PUBLIC
AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Position	Number of Employees in Position	Total Salaries	Total Travel	State Aid Salaries	State Aid Travel
I. Assuming Public Ownership					
Supervisor	1	$ 13,446	$ 402	$ 10,800	$ 402
Assistant Supervisor/Driver Trainer	1	10,000	400		
Maintenance Supervisor	1	10,000			
Clerks	2	10,000		2,200	
Custodian	1	5,000			
Substitute Drivers (see note)	5	2,604			
Subtotal: Administration	11	$ 51,050	$ 802	$ 13,000	$ 402
Bus Drivers	84	$128,248		$128,248	
Bus Aides	3	2,840		2,840	
Mechanics	7	34,054		34,054	
Subtotal: Operation	94	$165,142		$165,142	
TOTAL	105	$216,192	$ 802	$178,142	$ 402
II. Assuming Public Ownership Without Vertical Integration					
Supervisor	1	$ 13,446	$ 402	$ 10,800	$ 402
Assistant Supervisor/Driver Trainer	1	10,000	400		
Clerks	1.5	7,500		2,200	
Custodian	.5	2,500			
Substitute Drivers (see note)	5	2,604			
Subtotal: Administration	9	$ 36,050	$ 802	$ 13,000	$ 402
Bus Drivers	84	$128,248		$128,248	
Bus Aides	3	2,840		2,840	
Subtotal: Operation	87	$131,088		$131,088	
TOTAL	96	$167,138	$ 802	$144,088	$ 402

Note: Assuming 5.7% absenteeism

APPENDIX X

PRO FORMA COST OF PUPIL TRANSPORTATION IN MONTGOMERY COUNTY

SCHEDULE X-1

MONTGOMERY COUNTY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION

IN 1969-70

Type of Expenditure	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Contract Services	$ 5,027	$ 5,027	$ 5,027	$2,502,667
Special transportation for public school children	14,503	14,503	14,503	14,503
Operation of Publicly Owned buses	1,783,951	1,783,951	1,731,172	
Special transportation for non-public handicapped children	169,818	169,818	169,818	169,818
Special transportation for handicapped children to Maryland schools for the blind	2,212	2,212	2,212	2,212
Bus Inspections			4,500	4,500
Property damage, liability, and medical insurance paid by local unit	31,526	31,526	31,526	31,526
Salaries and travel costs of supervisors and salaries of clerks	38,560	38,560	38,560	38,560
Cost of materials of instruction	212	212	212	212
Reimbursement for driver participation in training program	16,440	16,440	16,440	16,440
Salaries of aides	60,056	60,056	60,056	60,056
Expenditures for capital facilities	26,935	27,941	7,653	8,376
Expenditures for vehicles	446,135	446,135	446,135	
Other	177,263	225,705	208,113	17,299
Total Allowances for State Aid Purposes	$2,772,638	$2,822,086	$2,735,927	$2,866,169
Less: Prorated Cost of Non-Public Pupils	(52,152)	(52,152)	(52,152)	(52,152)
Total State Aid	$2,720,486	$2,769,934	$2,683,775	$2,814,017

SCHEDULE X-2

MONTGOMERY COUNTY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION NOT QUALIFYING FOR STATE REIMBURSEMENT IN 1969-70

	Pro Forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Total State Aid	$2,769,934	$2,683,775	$2,814,017
Operation of publicly owned buses	291,158	291,158	
Substitute Drivers' Salaries	78,760	78,760	
Other disallowed costs of operation	1,303	1,303	1,025
Salaries and travel costs of supervisors and salaries of clerks	118,539	191,337	112,577
Salaries of aides	13,148	13,148	13,148
Expenditures for capital facilities	159,074		
Other	225,705	208,113	17,299
Miscellaneous			
- stationery, office supplies, postage	1,750	1,625	1,625
- custodial supplies, utilities, heat	5,225	875	875
- telephone and telegraph	500	500	500
- legal and accounting	27,500	27,500	5,500
Total State Aid and Unallowed Costs	$3,692,596	$3,498,094	$2,966,566
Adjustment to an Accrual Basis of Accounting			
Deduct: Expenditures for Capital Facilities and Vehicles	(633,150)	(453,788)	(8,376)
Add: Depreciation and Amortization	272,131	245,412	8,376
Total State Aid and Unallowed Costs on an Accrual Basis	$3,331,577	$3,289,718	$2,966,566
Imputed Cost of Capital (6% per annum on depreciated book value)	143,905	127,706	2,810
Federal, State, and Local Taxes Not Paid by Virtue of Public Ownership	116,663	108,227	4,782
Total Costs Stated on a Comparible, Accrual Basis	$3,592,145	$3,525,651	$2,974,158

SCHEDULE X-3

MONTGOMERY COUNTY

PRO FORMA COST OF CONTRACT OPERATION

Allowance for Depreciation and Interest		
Total Allowed Cost of County Vehicles	$3,564,031	
Less: Excess cost over maximum allowed	243,371	
Less: Spare Buses	302,691	
Total Allowed Cost for Formula Purposes	$3,017,969	
Factor per formula	x .185	$558,324
Allowance for Drivers' Salaries		1,086,227
Allowance for Fixed Costs		
Allowance for Fixed charges per vehicle	$125	
Number of vehicles	x 412	51,500
Allowance for Gasoline, Oil, Grease, Antifreeze, Tires and Maintenance		
6, 10, and 12 passenger vehicles		
Annual mileage	268,412	
Factor per formula	x $ .0792	21,258
30 passenger buses		
Annual mileage	72,568	
Factor per formula	x $ .1304	9,463
60 passenger buses		
Annual mileage	3,742,584	
Factor	x $ .1591	595,445
66 and 73 passenger buses		
Annual mileage	1,063,168	
Factor	x $ .1650	175,423
Total cost of Contract Operations of Routes Served in 1969-70 by Publicly Owned Vehicles		$2,497,640
Add: Cost of Contract Service in 1969-70		5,027
Total Cost of Contract Operation		$2,502,667

SCHEDULE X-4

MONTGOMERY COUNTY

PRO FORMA COST OF OPERATION OF PUBLIC BUSES WITH PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Drivers' Salaries As Reported	$1,377,386
Repairs, Maintenance and Other Costs	
6 passenger station wagon	
26,884 miles/year	
x$.0346 /mile	930
10 passenger van	
187,060 miles/year	
x$.0346 /mile	6,472
12 passenger (converted 60-66 passenger bus to transport the handicapped)	
54,468 miles/year	
x$.1272 /mile	6,928
30 passenger buses	
72,568 miles/year	
x$.1087 /mile	7,888
60 passenger buses	
3,742,584 miles/year	
x$.1272 /mile	476,057
66 passenger buses	
908,228 miles/year	
x$.1272 /mile	115,527
73 passenger buses	
154,940 miles/year	
x$.2010 /mile	31,143
Total Cost of Operation with Public Ownership without Vertical Integration	$2,022,331
Less: Excess Salaries not Allowed for State Aid Purposes	291,159
Total Cost of Operation for State Aid Purposes with Public Ownership Without Vertical Integration	$1,731,172

SCHEDULE X-5

MONTGOMERY COUNTY

PRO FORMA TABLE OF ORGANIZATION WITH PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION AND PRIVATE OWNERSHIP

Position	Number of Employees in position	Total Salaries	Total Travel	State Aid Salaries	State Aid Travel
I. Assuming Public Ownership Without Vertical Integration					
Supervisor	1	$ 18,850	$ 709	$ 10,200	$ 500
Area Supervisor	7	84,990	5,668	14,160	500
Driver Trainer	1	10,188			
Clerks	4	25,732		13,200	
Custodian	1	5,000			
Substitute Drivers	26	78,760			
Subtotal: Administration	40	$223,520	$6,377	$ 37,560	$ 1,000
Bus Drivers	434	$1,377,386		$1,086,228	
Bus Aides	28	73,204		60,036	
Subtotal: Operation	462	$1,450,590		$1,146,264	
Total	502	$1,674,110	$6,377	$1,183,824	$ 1,000
II. Assuming Private Ownership					
Supervisor	1	$ 18,850	$ 709	$ 10,200	$ 500
Area Supervisor	7	84,990	5,668	14,160	500
Driver Trainer	1	10,188			
Clerks	4	25,732		13,200	
Custodian	1	5,000			
Subtotal: Administration	14	$144,760	$6,377	$ 37,560	$ 1,000
Bus Aides	28	73,204		60,036	
Total	42	$217,964	$6,377	$ 97,596	$ 1,000

SCHEDULE X-6

MONTGOMERY COUNTY

VEHICLES IN SERVICE, MAY 1, 1969 - APRIL 30, 1970

Type of Vehicle County Owned	Model Year	Number of Vehicles	Acquisition Cost	Provision for Depreciation 1969-1970	Book Value	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
60-passenger buses	1960						
	1961	55	$ 250,763	$ 22,569	$ 58,929	$ 387,629	$ 7,048
	1962	33	157,433	14,169	51,166	243,360	7,375
	1963	32	158,327	14,249	65,705	244,782	7,648
	1964	37	172,817	15,553	87,272	267,141	7,220
	1965	34	163,475	14,712	97,268	252,700	7,432
	1966	31	148,138	13,332	101,474	228,917	7,387
	1967	54	316,210	28,459	245,062	403,120	7,456
	1968						
	1969	60	442,185	39,797	422,286	482,247	8,037
73-passenger buses	1960						
	1961						
	1962						
	1963						
	1964						
	1965						
	1966	5	50,610	3,036	39,981	78,233	15,646
	1967	5	56,031	3,361	47,626	71,428	14,286
	1968	10	119,119	7,147	108,398	145,194	14,519
	1969						
	1970						
30-passenger buses	1967	4	17,995	1,619	13,946	22,941	5,735
66-passenger buses	1968	75	536,198	48,257	463,811	653,572	8,714
12-passenger (converted 60-66 passenger) bus to transport the handicapped)	1967	2	13,797	1,241	10,692	17,588	8,794
	1969	2	17,437	1,569	15,083	21,254	10,627
10-passenger van	1964	2	7,190	-0-	719	11,114	5,557
	1968	8	24,129	4,343	17,614	29,411	3,676
6-passenger station wagon	1965	1	2,200	396	418	3,400	3,400
Totals		450	$2,654,054	$ 233,809	$1,847,450	$3,564,031	

SCHEDULE X-7

MONTGOMERY COUNTY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED

WITH PUBLIC, PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION AND PRIVATE OWNERSHIP

Description of Assets	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. Public Ownership			
Lincoln Center Shop	$ 89,000	$ 3,560	$ 44,500
Randolph Road Shop	227,681	9,107	218,574
Land - Lincoln Center - 14.1 acres	8,915		8,915
Land - Randolph Road - 10.2 acres	154,404		154,404
Shop Equipment	68,885	13,777	34,443
Service and Tow Trucks	21,809	3,512	13,957
Office Equipment	6,700	1,340	3,350
9 - Automobiles	18,990	3,418	17,281
Radio Equipment	11,090	2,218	5,545
3500 sq. ft. Office Facility	35,000	1,400	17,500
Inventory - 30 days of parts, tires, oil, and gasoline	32,500		32,500
Totals	$674,974	$38,322	$550,969
II. Public Ownership Without Vertical Integration			
Lincoln Center, fencing, paving	$ 7,500	$ 300	$ 3,750
Randolph Road, fencing, paving	73,169	2,927	70,242
Land - Lincoln Center - 14.1 acres	8,915		8,915
Land - Randolph Road - 10.2 acres	154,404		154,404
Office Equipment	6,700	1,340	3,350
9 - Automobiles	18,990	3,418	17,281
Radio Equipment	11,090	2,218	5,545
3500 sq. ft. Office Facility	35,000	1,400	17,500
Totals	$315,768	$11,603	$280,987
III. Private Ownership			
Office Equipment	$ 6,700	$ 1,340	$ 3,350
9 - Automobiles	18,990	3,418	17,281
Radio Equipment	11,090	2,218	5,545
Land - Lincoln Center - 5 acres	3,162		3,162
3500 sq. ft. Office Facility	35,000	1,400	17,500
Totals	$ 74,942	$ 8,376	$ 46,838

SCHEDULE X-8

MONTGOMERY COUNTY

PRO FORMA OTHER EXPENDITURES

	Actual Expenditures 1969-70	Pro Forma Costs Assuming		
		Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Allowances for State Aid				
Retirement	$ 83,460	$ 83,460	$ 69,152	$ 3,978
Social Security	66,768	71,733	56,777	4,639
Workman's Compensation Insurance	27,035	27,035	22,114	1,620
Subtotal: Allowances for State Aid Purposes	$177,263	$182,228	$148,043	$ 10,237
Retirement	$ 19,827	$ 26,291	$ 19,581	$ 2,112
Social Security	18,689	23,860	26,243	3,928
Workman's Compensation Insurance	9,197	11,244	9,115	2,063
Life Insurance	8,304	8,767	7,199	937
Hospitalization	47,802	47,802	46,686	3,906
Holiday Pay		99,289	99,289	4,353
Vacation Pay (hourly)		8,452		
Subtotal: Excess Cost over Allowances for State Aid	$103,819	$225,705	$208,113	$ 17,299
Total	$281,082	$407,933	$356,156	$ 27,536

SCHEDULE X-9

MONTGOMERY COUNTY

FEDERAL, STATE, AND LOCAL TAXES NOT COLLECTED BY VIRTUE OF PUBLIC OWNERSHIP

	Taxes Imputed for		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Federal Excise Taxes			
Bus chassis and bodies		(see note)	
Parts and accessories	$15,170	$15,170	
Gasoline		(see note)	
Lubricating oil	412	412	
Tires	13,107	13,107	
Subtotal	$28,689	$28,689	
State License Fees, Excise, Sales, and Other Taxes			
Vehicle license fees	$ 9,415	$ 9,180	$ 180
Title tax on vehicles	17,845	17,845	
Motor fuel tax		(see note)	
Unemployment compensation tax	46,260	45,180	3,780
General property tax @ $.20 per $100 assessed value	624	316	35
Subtotal	$74,144	$72,521	$3,995
Local Taxes			
General property tax @ $4.435 per $100 assessed value	$13,830	$ 7,017	$ 787
TOTAL	$116,663	$108,227	$4,782

Note: Both public and private operators are exempt from federal excise taxes on bus chassis, bus bodies, and gasoline. Both public and private operators pay Maryland's motor fuel tax.

APPENDIX XI

PRO FORMA COSTS OF PUPIL TRANSPORTATION IN WICOMICO COUNTY

SCHEDULE XI-1

WICOMICO COUNTY

PRO FORMA STATE AID FOR PUPIL TRANSPORTATION IN 1969-70

Type of Expenditure	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Contract Services	$766915			$766915
Special Transportation to Public School Children				
Operation of Publicly Owned Buses		$454029	$458302	
Special Transportation for Handicapped Children to Maryland Schools for the Deaf and Blind	5896	5896	5896	5896
Bus Inspections	817		817	817
Property Damage, Liability and Medical Insurance Paid by Local Unit:				
Contract	6637			6637
Publicly Owned		6637	6637	
Salaries and Travel Costs of Supervisors and Salaries of Clerks	14110	23400	23400	14110
Cost of Materials of Instruction	43	1000	1000	43
Reimbursement for Driver's Participation in Training Program		4442	4442	
Salaries of Aids	2299	2299	2299	2299
Expenditures for Capital Facilities		7067	6858	
Expenditures for Vehicles		164041	164041	
Other		27052	20702	
Total Allowances for State Aid Purposes	$796720	$695863	$694394	$796720
Less: Prorated Cost of Nonpublic Pupils				
Total State Aid	$796720	$695863	$694394	$796720

SCHEDULE XI-2

WICOMICO COUNTY

PRO FORMA EXPENDITURES FOR PUPIL TRANSPORTATION NOT QUALIFYING FOR STATE REIMBURSEMENT IN 1969-70

	Pro Forma Costs Assuming		
	Public Ownership	Public Ownership Without Vertical Integration	Private Ownership
Total State Aid	$695863	$694394	$796720
Contract Services			138
Salaries and Travel Costs of Supervisors and Salaries of Clerks	63452	53452	3772
Driver Participation in Training	1654	1654	
Expenditures for Capital Facilities and Vehicles	13366	-0-	3658
Other (fringe benefits)	12320	6884	1889
Miscellaneous			
-Stationery, office supplies, postage	1125	1000	250
-Custodial supplies, utilities, and heat	2500	500	500
-Telephone & Telegraph	500	500	500
-Legal and Accounting	7500	7500	1500
Total State Aid and Unallowed Costs	$798280	765884	808927
Adjustment to an Accrual Basis of Accounting:			
Deduct: Expenditures for Capital facilities and Vehicles	(184474)	(170898)	(3658)
Add: Depreciation and Amortization	107194	93619	3658
Total State Aid and Unallowed Costs on an Accrual Basis	$721000	688605	808927
Inputed Cost of Capital (6% per Annum on Depreciated Book Value	47208	39989	522
Federal, State, and Local Taxes Not Collected by Virture of Public Ownership	31530	29494	383
Total Costs stated on Comparable, Accrual Basis	$799738	758088	809832

SCHEDULE XI-3

WICOMICO COUNTY

PRO FORMA COST OF OPERATION

with PUBLIC OWNERSHP

Driver's Salaries 183 days @ 1,467.43/day	$268540
Repairs Maintenance, Gas, Oil, Anti-freeze and Other Costs	
30 passenger buses	
2247.2 miles/year	
x $.1168 1 mile	263
36 passenger buses	
7016.2 miles/year	
x $.1166 1 mile	818
42 passenger buses	
1288.3 miles/year	
x $.1166 1 mile	150
54 passenger buses	
3903.4 miles/year	
x $.1166 /mile	455
60/66 passenger buses	
1491285.3 miles/year	
x$.1166	173884
73 passenger buses	
57,370.5 miles/year	
x$.1729	9919
Total	$454029

SCHEDULE XI-4

WICOMICO COUNTY

PRO FORMA COST OF OPERATION WITH

PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Driver's Salaries 183 days @ $1,467.43/day	$268540
Requires, Maintenance, Gas, Oil, Anti-freeze and Other Costs	
30 passenger buses	
2,247.2 miles/year	
x$.1021 /mile	229
36 passenger buses	
7016.2 miles/year	
x$.1021 /mile	716
42 passenger buses	
1288.3 miles/year	
x$.1021 /mile	132
54 passenger buses	
3903.4 miles/year	
x$.1194 /mile	466
60/66 passenger buses	
1491285.3 miles/year	
x$.1194 /mile	178059
73 passenger buses	
57370.5 miles/year	
x$.1771 /mile	10160
TOTAL	$458302

SCHEDULE XI-5

WICOMICO COUNTY

PRO FORMA TABLE of ORGANIZATION with PUBLIC

AND PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Position	Number of Employees in Position	Total Salaries	Total Travel	State Aid - Salaries	State Aid - Travel
I. Assuming Public Ownership					
Supervisor	1	$ 13950	$1127	$ 10800	$ 500
Assistant Supervisor	2	20000	2000	7200	500
Maintenance Supervisor	1	10000			
Clerks	3	8718		4400	
Custodian	1	5000			
Substiture Drivers (see note)	7	15307			
Driver Trainer	1	10000	750		
Subtotal Administration	16	$ 82975	$3877	$ 22400	$1000
Bus Drivers	146	$268540		$268540	
Bus Aides	2	2635		2299	
Maintenance Staff	10	53306		53306	
Maintenance Secretary/Clerk	1	2906		2906	
Maintenance Custodian	1	5000		5000	
Subtotal Operation	160	$332387		$332051	
Total	176	$415362	$3877	$354451	$1000
II. Assuming Public Ownership Without Vertical Integration					
Supervisor	1	$ 13950	$1127	$ 10800	$ 500
Assistant Supervisor	2	20000	2000	7200	500
Clerks	3	8718		4400	
Custodian	1	5000			
Substitute Drivers (see note)	7	15307			
Driver Trainer	1	10000	750		
Subtotal Administration	15	$ 72975	$3877	$ 22400	$1000
Bus Drivers	146	$268540		$268540	
Bus Aides	2	2635		2299	
Maintenance Staff					
Maintenance Secretary/Clerk					
Maintenance Custodian					
Subtotal	148	$271175		$270839	
Total	163	$344150	$3877	$293239	$1000

Note. Assuming 5.7% Absenteeism

SCHEDULE XI-6

WICOMICO COUNTY

COUNTY VEHICLES IN SERVICE AT SEPTEMBER 1, 1969

Type of Vehicle	Model Year	Number of Vehicles	Aqusition Cost	Provision for Depreciation 1969-70	Book Value	Allowed Cost of Vehicles	Average Allowed Cost per Vehicle
Contractor Owner:							
-66 passenger bus	1962	1	5250*	472*	1706*	8115	8115
	'63	4	22451*	2020*	9317*	34705	8676
	'64	12	67682*	6091*	34179*	104625	8719
	'65	9	47514*	4276*	28271*	73448	8161
	'66	17	89134*	8022*	61057*	137786	8105
	'67	12	77630*	6987*	60163*	98968	8247
	'68	18	118577*	10672*	102569*	144536	8030
	'69	20	149128*	13422*	142417*	162644	8132
-60 passenger bus	'60	10	47453*	4271*	6881*	73355	7336
	'61	6	30262*	2724*	7112*	46780	7797
	'62	6	29854*	2687*	9703*	46150	7692
	'63	10	52942*	4765*	21971*	81840	8184
	'64	1	5122*	461*	2587*	7918	7918
	'66	3	14847*	1336*	10170*	22951	7650
	'67	1	5969*	537*		7610	7610
	'68	2	13539*	4626*		16503	8251
-54 passenger bus	'60	1	3946*	355*	572*	6100	6100
	'61	1	5219*	470*	1226*	8068	8068
	'64	1	5046*	454*	2548*	7800	7800
-36 passenger bus	1966	2	6881*	619*	4713	10637	5318
	'67	2	8628*	777*	6687	11000	5500
-30 passenger bus	1960	1	3299*	297*	478*	5100	5100
	'62	1	2771*	249*	901*	4284	4284
-73 passenger bus	1965	3	31482*	1889*	22982*	48666	16222
-42 passenger bus	1967	1	4393*	395*	3405*	5600	5600
Total		146	$849019*	$78874*	$541615*	$1175189	

*Pro Forma

SCHEDULE XI-7

WICOMICO COUNTY

PRO FORMA SCHEDULE OF OTHER ASSETS EMPLOYED WITH PUBLIC OWNERSHIP AND WITH PUBLIC OWNERSHIP WITHOUT VERTICAL INTEGRATION

Description of Asset	Estimated Original Cost	Provision for Depreciation	Estimated Book Value
I. Public Ownership			
Spare buses - 10% of vehicles in service	$ 84902	$ 7887	$ 54162
2 - Emergency	4500	810	2475
1 - Tow Truck	9250	1665	5088
3 - Automobiles	5604	1008	3082
2000 Square ft. Office Facility	20000	800	10000
4-Bay Maintenance Facility, Fencing, Paving	225000	9000	112500
Land - 10 Acres	25000		25000
Shop Equipment	25000	5000	12500
Office Equipment	5000	1000	2500
Base Radio Station	3500	700	1750
3 - Mobile Radio Units	2250	450	1125
Inventory - 30 Days on Parts, Tires, Gas, & Oil	15000		15000
Total Other Assests Employed	$425006	$28320	$245182
II. Public Ownership Without Vertical Integration			
Spare buses - 10% of vehicles in service	$ 84902	$ 7887	$ 54162
3-Automobiles	5604	1008	3082
2000 Square Ft. Office Facility	2000	800	1000
Fencing, Paving for 10 Acres	72500	2900	36250
Land - 10 Acres	25000		25000
Office Equipment	5000	1000	2500
Base Radio Statio	3500	700	1750
3 - Mobile Radio Units	2250	450	1125
Total Other Assets Employed	$200756	$14745	$124869

SCHEDULE XI-8

WICOMICO COUNTY

PRO FORMA OTHER EXPENDITURES

	Actual Expenditures 1969-70	Pro Forma Costs Assuming Public Ownership	Pro Forma Costs Assuming Public Ownership Without Vertical Integration	Pro Forma Costs Assuming Private Ownership
Allowances for State Aid				
Retirement		$ 3028	$ 896	
Social Security	(See note)	17199	14144	(See note)
Workmen's Compensation		6825	5622	
Subtotal: Allowances for State Aid Purposes		$27052	$20702	
Excess Cost Over Allowances for State Aid				
Retirement	668	$ 2423	$ 2128	$ 668
Social Security	509	2393	2055	509
Workmen's Compensation	268	1182	992	268
Life Insurance	72	357	314	72
Hospitalization	372	1488	1395	372
Holiday Pay		2345		
Vacation Pay (hourly)		2132		
Subtotal: Excess Cost Over Allowances for State Aid	$1889	$12320	$ 6884	$1889
Total	$1889	$39372	$27586	$1889

Note: In 1969-70 Submission for Reimbursement, the County did not apply for reimbursement for any of the above costs.

SCHEDULE XI-9

WICOMICO COUNTY

FEDERAL, STATE, AND LOCAL TAXES NOT COLLECTED BY VIRTUE OF PUBLIC OWNERSHIP

	Taxes Imputed for	
	Public Ownership	Public Ownership Without Vertical Integration
Federal Excise Taxes		
Bus chassis and bodies		(see note)
Parts and accessories	$5000	$5000
Gasoline		(see note)
Lubricating oil	125	125
Tires	3978	3978
Subtotal	$9103	$9103
State License Fees, Excise, Sales, and Other Taxes		
Vehicle license fees	$ 3375	$ 3280
Title tax on vehicles	140	40
Motor fuel tax		(see note)
Unemployment compensation tax	15,840	14,670
General property tax @ $.18 per $100 assessed value	155	122
Subtotal	$19,510	$18,112
Local Taxes		
General property tax @ $3.37 per $100 assessed value	2917	2279
TOTAL	$31,530	$29,494

Note: Both public and private operators are exempt from federal excise taxes on bus chassis, bus bodies, and gasoline. Both public and private operators pay Maryland's motor fuel tax.

APPENDIX XII

Excerpt from a

"REPORT TO THE GOVERNOR'S COMMISSION TO
STUDY THE PROBLEMS RELATING TO
SCHOOL PUPIL TRANSPORTATION"

Maryland School Bus Contractors Association, Inc.

September 29, 1969

The State Department of Education says:

"Publicly owned buses generally have a better safety record."

Let's see if they have.

State Superintendent of Schools, Dr. James A. Sensenbaugh three years ago before the members of the Maryland School Bus Contractors Association in annual convention stated:

> "The most important single consideration in any program of pupil transportation is safety....Safety is one area where no compromise can be tolerated."

After having made this statement what course of action should we expect from Dr. Sensenbaugh? Certainly we should not expect that he would start moving toward public ownership of school buses in the fact of an almost nationwide record favoring contract buses. But then let's take a look at a part of the record.

In Maryland,

Privately Owned Buses Safer in 1963-64

From information gathered by Carlton C. Command at Towson State Teachers College:

- Two-thirds of all buses in the State were operated under contract and these had forty-four percent of all accidents.

- One-third of all buses in the State were publicly owned and these had one-half of the accidents.

Privately Owned Buses Safer in 1964-65

From information gathered by W. L. Parker in cooperation with the Maryland State Police and the State Department of Education.

- Less than one-third of all buses, those owned by the counties was responsible for more than one-half of all bus accidents.

Privately Owned Buses Safer in 1967-68

In Maryland the higher the percentage of publicly owned and operated school buses in each of the four largest metropolitan counties the higher the percentage of school bus accidents.

County	Percent of Buses County or Publicly Owned	Percent of All School Bus Accidents in State
Montgomery	100.%	27.2%
Prince George's	96.%	24.8%
Baltimore	70.%	15.1%
Anne Arundel	6.7%	6.6%

During this year the county with the smallest number of pupils per square mile as shown below had the highest percentage of accidents. Its buses are entirely publicly owned.

Pupils Per Square Mile

Baltimore	67.5 pupils
Prince George's	61. "
Anne Arundel	56.4 "
Montgomery	55.6 "

Privately Owned Buses Safer in 1967-68 and 1968-69

From the Maryland State Police the information on the following pages was obtained. A breakdown has been requested on the causes of all accidents and whether they involved county owned or contract buses. If this information is received in time it will be included in this presentation.

Number of School Bus Accidents by Counties of Maryland
School Year 1967-1968

Montgomery	82
Prince George's	76
Baltimore	46
Anne Arundel	20
Harford	15
St. Mary's	11
Calvert	8
Charles	6
Howard	6
Allegany	5
Frederick	5
Carroll	5
Washington	5
Cecil	4
Somerset	3
Queen Anne's	2
Dorchester	2
Dent	1
Total	302

The graph on the following page shows the comparison of Anne Arundel and Montgomery, the two large metropolitan counties, the first operating under contract, the second being county owned.

Note: The graph submitted by the representatives of the Maryland school bus Contractors Association showed the following comparison:

	Per cent Buses in State	Per cent Accidents in State
Anne Arundel County	9.2%	6.6%
Montgomery County	9.6%	27.2%

Attached is information requested by Capt. Kavanagh pertaining to number of school bus accidents by county for school year 1968-1969. Figures obtained from Accident reports furnished by Central Accident Records Division.

	Total Accidents	Fatal	Personal Injury	Property Damage	# Killed	# Injured
Allegany	2	0	1	1	0	1
A. A.	24	0	7	17	0	12
Balto.	45	0	13	32	0	30
Calvert	2	0	1	1	0	7
Caroline	0	0	0	0	0	0
Carroll	1	0	0	1	0	0
Cecil	1	0	0	1	0	0
Charles	5	0	1	4	0	1
Dorchester	1	0	1	0	0	0
Frederick	5	0	3	2	0	10
Garrett	1	0	0	1	0	0
Harford	8	0	1	7	0	1
Howard	4	0	1	3	0	1
Kent	1	0	1	0	0	1
Mont.	89	0	18	71	0	55
P. G.	66	0	16	50	0	40
Queen Anne	1	0	0	1	0	0
St. Mary's	2	0	2	0	0	4
Somerset	1	0	1	0	0	5
Talbot	1	0	0	1	0	0
Wash.	4	0	2	2	0	2
Wicomico	2	0	2	0	0	3
Worchester	2	0	1	1	0	1
Total	268	0	72	196	0	182

Comparison
School Bus Accidents
Caused by Drivers of Buses

Cause	Montgomery County	Anne Arundel County
Improper Parking	1	-
Improper Backing	1	1
Failed to Give Right of Way	8	4
Did Not Reduce Speed	17	-
Reckless Driving	1	2
Skidding	-	1
Passed Too Close	-	1
Defective Wheels & Brakes	3	1
Struck Parked Vehicle	-	1
Improper Passing	4	-
Improper Left Turn	1	-
Inattention to Stop Signs, Wrong Side of Road Etc.	8	-
Disregard of Signals Changing Lanes Etc.	5	-
	49	11

In the past statements have been made by the Maryland School Bus Contractors Association on the point that private ownership of school buses encourages and impels high levels of personal concern in the interest of safety and the care of buses. The above analysis of the causes of accidents charged against school bus drivers would seem to substantiate this claim.

It would seem that driver training programs should be reviewed to determine their applicability.

INFORMATION ON SAFETY FROM OTHER STATES

Oregon

Privately Owned Buses Safer in Oregon

"The safety records of private contractors is far better nationwide than the public owned. For example, in Oregon, 20% of the buses are contract owned yet only 14% of the accidents during the 1967-68 school year are attributed to the contract buses".

California and Florida

From the above two states we have the results of a study entitled "Statistical Summary of School Bus Accidents Data" prepared for and published by the Federal Highway Administration July 31, 1968 is presented:

	Publicly Owned Buses				Privately Owned Buses			
	No.	%	Accidents	%	No.	%	Accidents	%
California	8108	76.5	1262	86.3	2496	23.5	201	13.7
Florida	3744	66.6	253	80.9	1868	33.4	60	19.1

Recognition must be given to the fact that school bus accidents in addition to endangering the lives of children increase the costs of maintenance and operation.

RECOMMENDATION

Since the above would seem to prove conclusively that school buses operated under contracts are safer for children the recommendation is made that all of the counties and the City of Baltimore abandon their present practice of public ownership.

Also in view of the above Dr. Sensenbaugh, State Superintendent of Schools should promote the employment of "contract" buses in every school system in the State and thereby give meaning to his recent statement:

> "The most important single consideration in any program of pupil transportation is safety.....Safety is one area where no compromise can be tolerated".

APPENDIX XIII

Excerpts from

"REBUTTAL ON TESTIMONY BY
REPRESENTATIVES OF THE MARYLAND
SCHOOL BUS CONTRACTORS ASSOCIATION
BEFORE THE GOVERNOR'S COMMISSION TO
STUDY THE PROBLEMS RELATING TO
SCHOOL PUPIL TRANSPORTATION"

The Maryland State Department of Education

October 6, 1969

Note: The text of this excerpt is keyed to the testimony appearing in Appendix

CLAIM (pages 8-10)

(Relates to safety and makes claims in support of contract operators.)

COMMENT

More accidents are reported by publicly-owned bus drivers because those drivers are more closely controlled. As an example, Montgomery County bus drivers reported 64 accidents in 1967-68 but there were only 4 injuries. When a school bus has an accident in that county, it may not be moved until an investigating officer releases it. Anne Arundel County, whose school buses are mostly contractor-owned, has a bus fleet which is about the same size as Montgomery County's. In the same year Anne Arundel County reported 20 accidents and 15 injuries.

When an accident is not in the interest of a contract owner to report, he is under no legal requirement to do so. Where injuries occur, of course, he has no option.

Where some measure of control over accident reporting by contract operators does exist, as in the cases of Washington and Baltimore Counties in the Carlton C. Command study referred to as an authority by the Contractors Association, publicly-owned buses are shown to have a better record than contractor-owned.

FURTHER COMMENT

OF THE 15 FATALITIES IN 9 ACCIDENTS IN MARYLAND OVER THE PAST TEN YEARS IN WHICH SCHOOL BUSES HAVE BEEN INVOLVED, FOUR SHOWED A LACK OF SUFFICIENT EVIDENCE TO INDICATE ERROR ON THE PART OF THE SCHOOL BUS DRIVER, BUT ALL THE REMAINING ELEVEN DEATHS SHOWED EVIDENCE OF ERROR ON THE PART OF THE DRIVERS. ALL THOSE DRIVERS WERE DRIVING CONTRACTOR-OWNED BUSES.

CLAIM (page 13)

Since the above (Pages 10-13 of the Association's report) would seem to prove conclusively that school buses operated under contracts are safer for children the recommendation is made that all of the counties and the City of Baltimore abandon their present practice of public ownership.

Also in view of the above Dr. Sensenbaugh, State Superintendent of Schools should promote the employment of "contract" buses in every school system in the State and thereby give meaning to his recent statement:

> "The most important single consideration in any program of pupil transportation is safety..... Safety is one area where no compromise can be tolerated".

COMMENT

In the light of fatality experience in Maryland and lack of validity of accident report data by contract bus drivers, the recommendation loses its force.

APPENDIX XIV

SUMMARY OF SCHOOL BUS ACCIDENTS: STATE OF MARYLAND

SCHOOL YEARS:

1969-70

1968-69

1967-68

1966-67

SUMMARY OF SCHOOL BUS ACCIDENTS: STATE OF MARYLAND

SCHOOL YEAR 1969-70

(as of June 1970)

Local Unit	Number of Accidents	Passengers Injured		Passengers Killed	
		School Bus	Other Vehicle or Pedestrian	School Bus	Other Vehicle or Pedestrian
TOTAL STATE	969	150	70		1
Allegany	26	5			
Anne Arundel	97	25	13		
Baltimore City	52	5	6		
Baltimore	195	13	8		
Calvert	5				
Caroline	2				
Carroll	23		2		
Cecil	12	14	2		
Charles	7	3	3		
Dorchester	2				
Frederick	56	2	3		
Garrett	3				
Harford	47	13	4		
Howard	11	1			
Kent	3	5			
Montgomery	183	21	9		
Prince George's	182	28	12		1
Queen Anne's	0				
St. Mary's	5	4	2		
Somerset	2				
Talbot	0				
Washington	51	10	5		
Wicomico	1				
Worcester	4	1	1		

SUMMARY OF SCHOOL BUS ACCIDENTS: STATE OF MARYLAND

SCHOOL YEAR 1968-69

(as of June, 1969)

Local Unit	Number of Accidents	Passengers Injured		Passengers Killed	
		School Bus	Other Vehicle or Pedestrian	School Bus	Other Vehicle or Pedestrian
TOTAL STATE	737	245	46	1	1
Allegany	18	6			
Anne Arundel	48	52	2	1	
Baltimore City	34	6	1		
Baltimore	172	11	5		
Calvert	7	2			
Caroline	2	13	4		
Carroll	12	2			
Cecil	9	4			
Charles	8				
Dorchester	4		1		
Frederick	23	12	2		
Garrett	6	1			
Harford	34	5	2		
Howard	8	3	1		
Kent	3		1		
Montgomery	181	104	14		
Prince George's	127	15	9		
Queen Anne's	2				
St. Mary's	5	4	2		
Somerset	1	2			
Talbot	1				
Washington	26	2	1		
Wicomico	4		1		
Worcester	2	1			

SUMMARY OF SCHOOL BUS ACCIDENTS: STATE OF MARYLAND

SCHOOL YEAR 1967-68

(as of June, 1968)

Local Unit	Number of Accidents	Passengers Injured		Passengers Killed	
		School Bus	Other Vehicle or Pedestrian	School Bus	Other Vehicle or Pedestrian
TOTAL STATE	688	74	56		
Allegany	21	1			
Anne Arundel	29	6	6		
Baltimore City	21		2		
Baltimore	171	15	10		
Calvert	10				
Caroline					
Carroll	8	1			
Cecil	11		1		
Charles	9	2	4		
Dorchester	7		2		
Frederick	26	6			
Garrett	6	3			
Harford	24	10	3		
Howard	7	6	1		
Kent	5		1		
Montgomery	180	2	11		
Prince George's	94	6	7		
Queen Anne's	2	7			
St. Mary's	5		1		
Somerset	3		2		
Talbot	1				
Washington	42	8	4		
Wicomico	6	1	1		
Worcester					

SUMMARY OF SCHOOL BUS ACCIDENTS: STATE OF MARYLAND

SCHOOL YEAR 1966-67

(as of June, 1967)

Local Unit	Number of Accidents	Passengers Injured		Passengers Killed	
		School Bus	Other Vehicle or Pedestrian	School Bus	Other Vehicle or Pedestrian
TOTAL STATE	477	38	34		1
Allegany	16		1		
Anne Arundel	36	8	2		
Baltimore City	8	7	7		
Baltimore	124	3	6		1
Calvert	6		3		
Caroline					
Carroll	9		1		
Cecil	6				
Charles	4	1	1		
Dorchester	1	4			
Frederick	23	1	2		
Garrett	6	1			
Harford	18				
Howard	7				
Kent	3		4		
Montgomery	73				
Prince George's	100	11	6		
Queen Anne's	1	1			
St. Mary's	2	1			
Somerset	2				
Talbot	4		1		
Washington	26				
Wicomico	1				
Worchester	1				

APPENDIX XV

EXERPT FROM THE DIXON COMMITTEE'S REPORT

A Possible Linear Density Index for Use in Maryland

With regard to the development of a numerical index, a recent

---

[3]C. D. Hutchins and T. C. Holy, "Pupil Transportation in Chio," American School and University, 10th Annual Ed. (New York: American School Publishing Corp., 1938), pp. 593-99.

[4]Earl C. Welshimer, et. al., Four Factor Formula and Tables, (Columbus: State Department of Education, Revised 1951), Chapter III.

study completed by Henry in Maryland identified a numerical index arrangement for reimbursement for operating costs.[5] A major purpose in this study was that of attempting to introduce maximum objectivity into the pupil transportation reimbursement formula.

In developing the numerical index, a factor of pupil linear density was used. This factor was determined by dividing the average number of pupils transported per hour by the average miles traveled per hour to arrive at the average number of pupils transported per mile. The same result was achieved when the total number of pupils transported per day was divided by the total miles traveled per day. These results are contained on Tables XII and XIII on the following pages.

In this study, a coefficient of correlation was calculated to determine the relationship between linear density and the daily cost for operating expenses as shown on Table XIV. The following values were obtained with "X" being the number of pupils per mile and "Y" being the daily cost per pupil:

$$M_X = 1.5 \text{ (pupils)}$$

$$M_Y = 20.3 \text{ (cents)}$$

$$x = .51$$

$$y = 5.67$$

(Pearson r) $$r = \frac{-18.17}{24} = -.757$$

---

[5] Paul A. Henry, "A Study of Factors Related to State Reimbursement of Pupil Transportation Costs in the Twenty-four Local School Systems of Maryland" (unpublished Doctor's dissertation, American University, Washington, 1964), pp. 151-64.

Table XII

AVERAGE PUPILS TRANSPORTED PER MILE BASED
ON MILES PER HOUR AND PUPILS PER HOUR
(EXCLUDING SPECIAL EDUCATION ROUTES)
FOR SCHOOL YEAR 1962-63

Local Unit	Average Miles Traveled Per Hour	Average Pupils Transported Per Hour	Average Pupils Transported Per Mile
Allegany	16.4	33.5	2.0
Anne Arundel	18.7	33.4	1.8
Baltimore City	7.7	21.5	2.8
Baltimore	16.1	36.7	2.3
Calvert	23.2	27.1	1.2
Caroline	19.4	25.0	1.3
Carroll	23.4	43.0	1.8
Cecil	20.7	31.4	1.5
Charles	23.0	29.5	1.3
Dorchester	24.5	17.8	.7
Frederick	17.8	23.3	1.3
Garrett	15.3	16.8	1.1
Harford	19.4	29.0	1.5
Howard	19.2	34.3	1.8
Kent	30.9	34.2	1.1
Montgomery	16.8	25.9	2.2
Prince George's	19.0	47.9	2.5
Queen Anne's	26.7	31.4	1.2
St. Mary's	29.7	41.1	1.4
Somerset	14.7	18.9	1.3
Talbot	22.0	23.5	1.1
Washington	20.3	34.6	1.7
Wicomico	17.8	21.4	1.2
Worcester	22.1	19.8	.9
Totals	18.1 Aver.	31.1 Aver.	1.7 Aver.

Table XIII

AVERAGE NUMBER OF PUPILS TRANSPORTED PER MILE
(EXCLUDING SPECIAL EDUCATION ROUTES)
FOR SCHOOL YEAR 1962-63

Local Unit	Pupils Transported Per Day	Miles Traveled Per Day	Average Number of Pupils Per Mile
Allegany	8,233	4,033	2.0
Anne Arundel	27,393	15,368	1.8
Baltimore City	1,652	597	2.8
Baltimore	45,529	19,963	2.3
Calvert	4,769	4,093	1.2
Caroline	3,855	2,998	1.3
Carroll	11,322	6,159	1.8
Cecil	7,765	5,115	1.5
Charles	9,158	7,138	1.3
Dorchester	3,702	5,084	.7
Frederick	10,375	7,942	1.3
Garrett	5,113	4,653	1.1
Harford	13,911	9,327	1.5
Howard	8,108	4,526	1.8
Kent	2,290	2,068	1.1
Montgomery	34,034	15,337	2.2
Prince George's	36,659	14,566	2.5
Queen Anne's	3,686	3,135	1.2
St. Mary's	6,815	4,925	1.4
Somerset	3,004	2,330	1.3
Talbot	2,699	2,530	1.1
Washington	12,030	7,055	1.7
Wicomico	6,686	5,544	1.2
Worcester	4,344	4,834	.9
Totals	273,132	159,320	1.7 Aver.

Table XIV

DAILY COST PER PUPIL TRANSPORTED ON REGULAR BUSES
(INCLUDES ONLY OPERATING COSTS)
FOR SCHOOL YEAR 1962-63

Local Unit	Total Annual Operating Costs *	Regular Pupils Transported Per Day	Annual Cost Per Pupil	Days Operated	Daily Cost Per Pupil
Allegany	$ 262,241	8,233	$ 31.85	184	$ .173
Anne Arundel	703,339	27,393	25.68	185	.139
Baltimore City	65,384	1,652	39.58	185	.214
Baltimore	1,085,365	45,529	23.84	185	.129
Calvert	206,477	4,769	43.30	184	.235
Caroline	167,069	3,855	43.34	183	.237
Carroll	290,378	11,322	25.65	180	.143
Cecil	241,549	7,765	31.11	184	.169
Charles	335,348	9,158	36.62	183	.200
Dorchester	232,641	3,702	62.84	183	.343
Frederick	331,037	10,375	31.91	183	.174
Garrett	260,116	5,113	50.87	183	.278
Harford	525,540	13,911	37.78	183	.206
Howard	249,600	8,108	30.78	183	.168
Kent	108,689	2,290	47.46	183	.259
Montgomery	969,882	34,034	28.50	185	.154
Prince George's	709,396	36,659	19.35	184	.105
Queen Anne's	155,753	3,686	42.26	183	.231
St. Mary's	201,202	6,815	29.52	182	.162
Somerset	128,119	3,004	42.65	184	.232
Talbot	127,998	2,699	47.42	182	.261
Washington	320,833	12,030	26.67	183	.146
Wicomico	287,718	6,686	43.03	184	.234
Worcester	224,386	4,344	51.65	183	.262
Totals	$8,190,060	273,132	$ 29.99 Aver.	183 Aver.	$.164 Aver.

* Includes drivers' salaries, gas, oil, tires, antifreeze, chains, maintenance and repair, and fixed costs.

The high negative value of this coefficient of correlation was very close to the correlation of -.798 when a comparison of pupils per square mile of land area and total transportation costs was made. The reason for the differentiation is explained by the fact that the correlation regarding linear density and daily cost per pupil did not include capital outlay costs. Therefore, with capital outlay included, the coefficient value would have been even higher. This relatively high coefficient of correlation did provide reinforcement to the premise, as developed in the Kentucky and Ohio studies, that pupil density does significantly influence pupil transportation costs.

On the basis of these findings as well as other research reported in his study, Henry graphically developed the relationship between daily cost per pupil for operating costs and pupils per linear mile of bus route. The results are shown on Figure 2. The next step was using the means of the arrays for each of the values to plot a smoothed curve upon which cost allowances could be figured. This smoothed curve is shown on Figure 3 with a dotted line illustration to indicate that at a 1.5 pupil per linear mile of bus route value the daily rate would be seventeen cents per pupil.

Using the numerical linear density index derived in the material above, the difference from present reimbursement would vary from a loss of $182,846 per year in Montgomery County to the addition of $56,817 annually in Anne Arundel County. Table XV shows the comparison of allowances under the linear density index and present reimbursement plan.

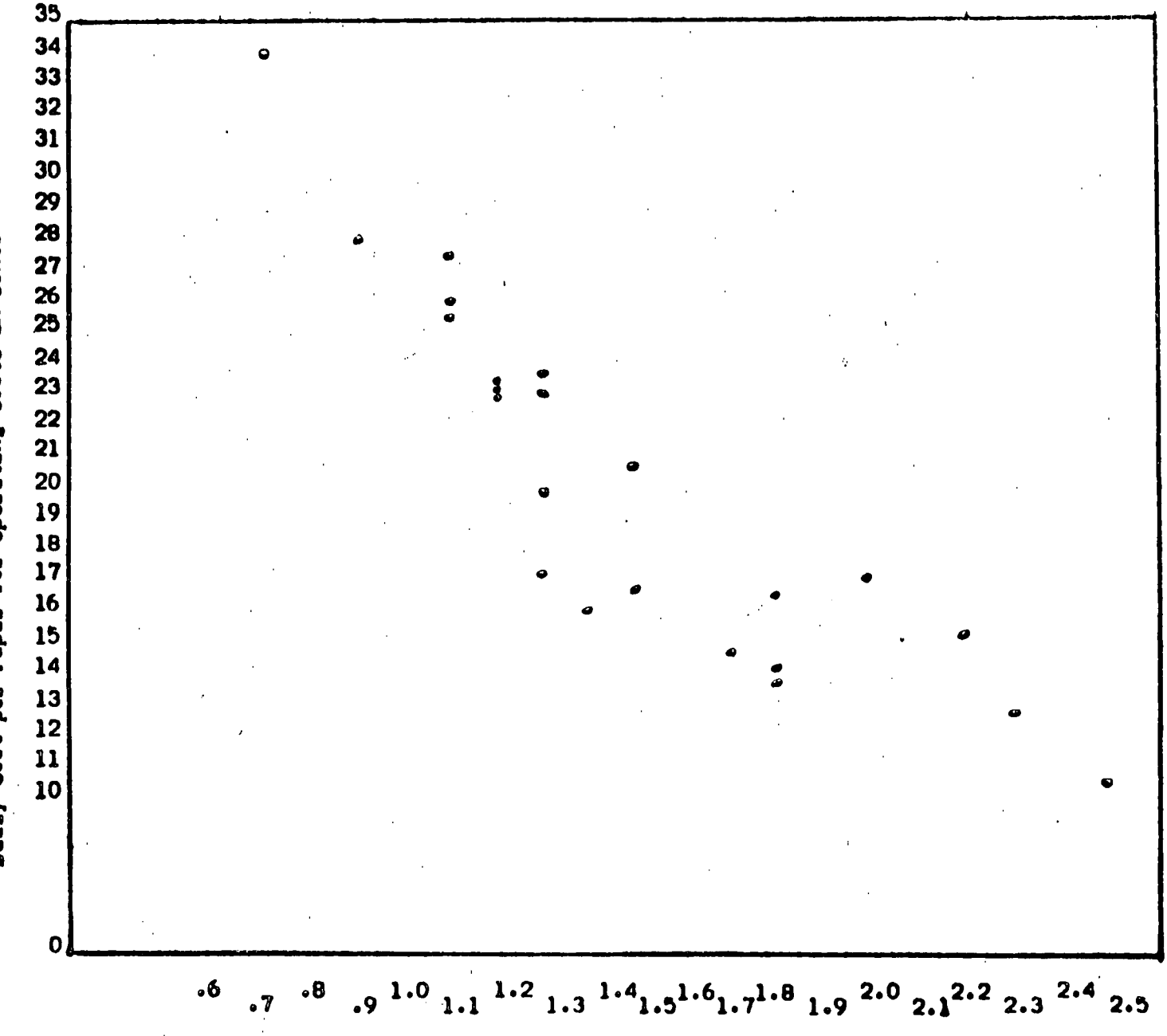


Figure 2

A Comparison of Pupil Density with Daily Cost per Pupil for Operating Costs

1962-63

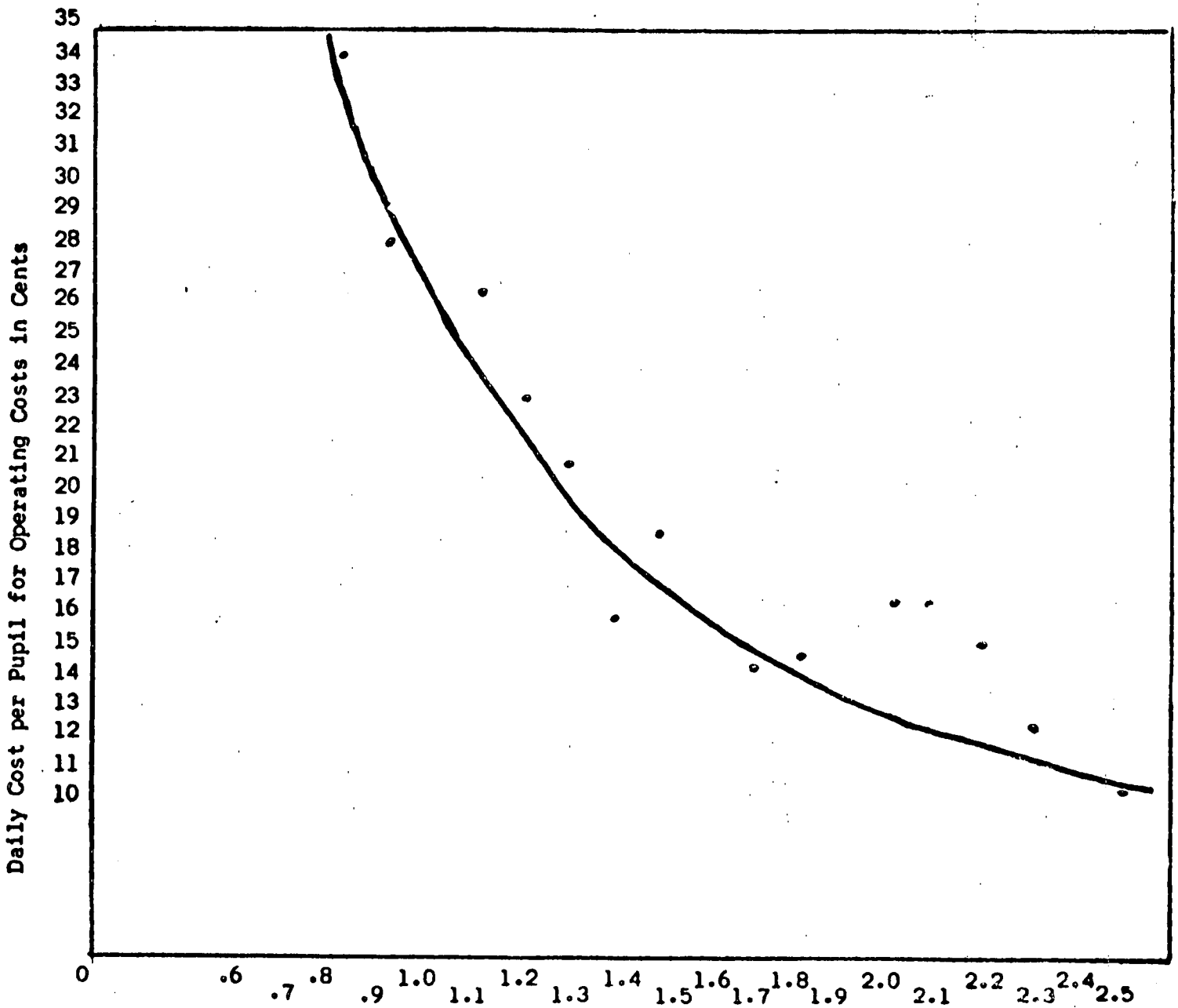


Figure 3

A Smoothed Graph of Cost Allowance
Based on Pupils per Linear Mile of Bus Route

1962-63

Table XV

COMPARISON OF ALLOWANCE FOR OPERATING COSTS UNDER PROPOSED PLAN WITH ALLOWANCES UNDER EXISTING PLAN (EXCLUDING SPECIAL EDUCATION ROUTES 1962-63)

Local Unit	Pupils Transported Daily	Proposed Per Pupil Daily Rate	Number Days Operated 1962-63	Total Proposed Amount	Amount Received 1962-63	Difference
Allegany	8,233	$.135	184	$ 204,508	$ 262,241	- $ 57,733
Anne Arundel	27,393	.150	185	760,156	703,339	+ 56,817
Baltimore City	1,652	not applicable	185			
Baltimore County	45,529	.120	185	1,010,744	1,085,365	- 74,621
Calvert	4,769	.220	184	193,049	206,477	- 13,428
Caroline	3,855	.200	183	141,093	167,069	- 25,976
Carroll	11,322	.150	180	305,694	290,378	+ 15,316
Cecil	7,765	.170	184	242,889	241,549	+ 1,340
Charles	9,158	.200	183	336,171	335,348	+ 823
Dorchester	3,702	.330	183	223,564	232,641	- 9,077
Frederick	10,375	.200	183	379,725	331,037	+ 48,688
Garrett	5,113	.245	183	229,242	260,116	- 30,874
Harford	13,911	.170	183	432,771	525,540	- 92,769
Howard	8,108	.150	183	222,565	249,600	- 27,035
Kent	2,290	.245	183	102,672	108,689	- 6,017
Montgomery	34,034	.125	185	787,036	969,882	- 182,846
Prince George's	36,659	.110	184	741,978	709,396	+ 32,582
Queen Anne's	3,686	.220	183	148,398	155,753	- 7,355
St. Mary's	6,815	.185	182	229,462	201,202	+ 28,260
Somerset	3,004	.200	184	110,547	128,119	- 17,572
Talbot	2,699	.245	182	120,349	127,998	- 7,649
Washington	12,030	.155	183	341,231	320,833	+ 20,398
Wicomico	6,686	.220	184	270,649	287,718	- 17,069
Worcester	4,344	.290	183	230,536	224,386	+ 6,150
Totals				$7,765,029	$8,124,676	- $359,647

This smoothed curve was used to derive the numerical index formula listed below.

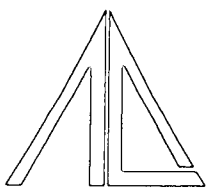
Numerical Index Formula for Operating Costs

Pupils Per Mile of Bus Route	Operating Cost Allowance Per Pupil Per Day (Cents)	Pupils Per Mile of Bus Route	Operating Cost Allowance Per Pupil Per Day (Cents)
.7	33.0	1.7	15.5
.8	31.5	1.8	15.0
.9	29.0	1.9	14.5
1.0	26.5	2.0	13.5
1.1	24.5	2.1	13.0
1.2	22.0	2.2	12.5
1.3	20.0	2.3	12.0
1.4	18.5	2.4	11.5
1.5	17.0	2.5	11.0
1.6	16.5		

This committee read and studied with much interest the portion of the dissertation dealing with the numerical index basis of reimbursement. It was the committee's opinion that the values shown in the numerical index formula were arrived at in a statistically correct manner and that such arrangement would provide incentive in the local school system to operate within the allowance. However, the committee believes that somewhat higher per day allowances should be permitted for a transitional period from the time the existing reimbursement arrangement is changed to the use of such an index. Further, such an index plan should be thoroughly evaluated at the end of each year's usage

to make certain that values reflected were adequate and in the best interests of the State of Maryland with regard to pupil transportation programs.

In conclusion, the committee believes the time may come when an index basis similar to the one studied will be adopted. The committee is mindful of the fact that the Hughes Bill for State aid to education allowed transportation to remain outside the State formula. Therefore, it is believed that as the cost of transportation increases, there will be added incentive and additional public awareness of the high cost of pupil transportation in certain sections of the State. The use of a fair, practical, and adequate index arrangement should certainly help to alleviate public concern in this whole matter.



CAMBRIDGE,
MASSACHUSETTS

CHICAGO
NEW YORK
SAN FRANCISCO
WASHINGTON
ATHENS
BRUSSELS
CARACAS
LONDON
MEXICO CITY
PARIS
RIO DE JANEIRO
TORONTO
ZURICH